DISSERTATION ON

A STUDY TO ASSESS THE EFFECTIVENESS OF LOWER BACK MASSAGE AND BREATHING EXERCISES ON REDUCTION OF ANXIETY AND PAIN PERCEPTION AMONG PRIMIGRAVIDA MOTHERS DURING FIRST STAGE OF LABOUR AT DEEPAM HOSPITAL LIMITED, TAMBARAM, CHENNAI.

M.SC. (NURSING) DEGREE EXAMINATION
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THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY, CHENNAI-600 032.

In partial fulfillment of the requirements or the degree of
MASTER OF SCIENCE IN NURSING

OCTOBER 2018

CERTIFICATE

This is to certify that this dissertation titled, **"A study to assess the Effectiveness of lower back massage and breathing exercises on reduction of anxiety and pain perception among primigravida mothers during first stage of labour at Deepam Hospitals Limited, Tambaram, Chennai"** is a bonafide work done by Ms.Uma Ranga, M.Sc (N) II year, Padmasree College of Nursing, Walajabad submitted to The Tamil Nadu Dr.M.G.R. Medical University, Chennai in partial fulfillment of requirements for the award of the degree of Master of Science in Nursing, Branch-III, Obstetrics and Gynaecological Nursing under our guidance and supervision during the academic period from 2016-2018.

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ABSTRACT

Childbirth is never the same and it may differ between women and between labour. It's said that the greatest pain that Mother Nature inflicts upon a human is during labour. A Quasi experimental design was adopted to conduct the study. 60 primigravida mothers from labour ward who were in first stage of labour were selected by using purposive random sampling technique. Data were collected using structured interview schedule and pain assessment, anxiety assessment scale. Data were analysed using descriptive and inferential statistics in terms of mean deviation and chi-squire test.Pre-test among the experimental group, majority of the mothers had severe level of anxiety and pain perception is 76.7% & 36.7% severe pain. In control group, 80% &63.3% of the mothers had moderate level of pain. In post-test, in experimental group, 20.0% of the mothers had mild pain, 90.0% of the mother had moderate level of pain, 16.7% are having severe level of pain. In experimental group there is a significant decrease in pain and anxiety reduction level is statistically significant. In control group there is a significant decrease in pain and anxiety reduction level is statistically significant. On the average, experimental group mothers are having 34.27 anxiety score in pre-test and they are having 22.04 anxiety score in post-test, so the difference is 12.23. this difference is large and it is statistically significant. It was calculated using paired t-test. In experimental group mothers are having 7.63 pain score in pre-test and they are having 3.30 pain score in post-test, so the difference 4.33. This difference is large and it is statistically significant. It was calculated by using paired t-test .Exercising this book support whenever the primigravida mothers in the first stage of labour will reduce the anxiety and pain perception will bring healthy life. By practicing this lower back massage and breathing exerxises in the first stage of labour, will not lead to long term pain.

CHAPTER- I
INTRODUCTION

Whenever a woman is in labour, she has pain, because her hour has come; but when she gives birth to the child, she no longer remembers the anguish because of the joy that a child has been born into the world."

- John 16: 21

In art and literature, in folk tales and mythology, the mother as the personification of love and compassion has been glorified and put up on a pedestal'. "Of all the rights of women, the greatest is to be a mother." This famous saying clearly indicates that the mother is the greatest gift and life is mother's gift to everyone. Pregnancy is a beautiful and natural condition. Nine transformative months full of excitement, planning and peering at the awesome unfolding of life.

Natural childbirth is a beautiful experience with many safe options and benefits. Comfort is an interesting concept in the context of the pain of childbirth. The feeling of comfort is the expression of having met present or impending needs or desires in three domains: body, mind and spirit.

Childbirth is never the same and it may differ between women and between labour. It's said that the greatest pain that Mother Nature inflicts upon a human is during labour. Studies have shown that around 70% of women experience aweful labour and around 10% of them experience an almost painless labour. The remaining women experience labour, which is neither horrible nor painless. Pregnancy and childbirth are the fragile processes which require more than just medical care. Pregnant women commonly worry about the pain they will experience during labour and how they react and deal with that pain. It is an

anxiety-producing situation for many women and pain is a major concern during labour.

Anxiety is commonly associated with increased pain during labour and may modify labour pain through psychological and physiologic mechanisms. Fear of pain may be one component of labour-related anxiety and has a high correlation with pain levels reported during the first stage of labour.

This is the time the mother, the source of life, needs physical and emotional support to pass over this plateau. This support can be given in various forms by various people and through various means. They expect that they will be supported through the promotion of their physical comfort using a blend of some pharmacological and non-pharmacological.

"To touch is human but the feelings are divine." This reminds us about the importance of touch and massage'. So the massage along with breathing exercises labour support cannot be underestimated, since it is proved through experiments and experience of many mothers in labour. The childbirth experience is not only memorable in a woman's life, but it also colours the life of the women and through her the entire family.

1.1. NEED FOR THE STUDY

"I will greatly increase your pains in childbearing; with pain you will give birth to child."

- Genesis 3:11

To be a mother is to take on one of the most emotionally and intellectual demanding, exasperating, strenuous, anxiety-arousing, and deeply satisfying tasks in the life of every women." Childbearing is a

natural physiological event and is the most unforgettable experience in a woman's life and labour is the most critical period.

For several decades the childbirth educators have focused on the alleviation or reduction of pain and suffering during the childbirth.

As the labour pain is acute, which increases quickly, pain relief poses a major problem. Labour pain is caused by uterine contractions and the dilatation of the cervix and in the late first stage and second stages by the stretching of the vagina and pelvic floor to accommodate the presenting part. The perception of acute pain during labour originates with the transmission of noxious sensory input to the central nervous system. These painful stimuli are said to be transmitted by thoracic, lumbar and sacral nerves, that is, T10, T11, T12, L1, S2, S3, and S4, although increase or decrease in pain level may be seen throughout labour when the reports of individual women are studied.

Even though in moderate degree, it causes a positive effect, in severe degree it causes physiological, physical reflex actions and physiological responses like decreased uterine contractility, lengthening of labour, increased anxiety, crying and muscular excitability throughout the body.

As an old saying goes, "to be alive is to be under stress and anxiety." Certain amount of anxiety is beneficial but too much is harmful. However, anxiety for each one is different. Individuals respond differently to anxiety. It can be manifested psychologically and physically, and this anxiety is commonly associated with increased pain during labour. Maternal anxiety is a common feature of childbirth. Animal and human studies have shown that conditions which arouse anxiety can prolong labour and have deleterious effect on the foetus.

To avoid such tension and exhaustion, a mother should be taught some relaxation and breathing exercises which will help her to cope with the stress during labour. A wide array of non-pharmacological pain relief measures is presently available to women in labour. Relaxation, breathing techniques, positioning, massage, hydrotherapy, music etc are some comfort measures women may initiate during labour to achieve an effective coping level for their labour experience.

Relaxation is thought to increase pain tolerance through a number of mechanisms including reduction of anxiety, decreased catecholamine response, increased uterine blood flow and decreased muscle tension. This relaxation is mainly enhanced by a specific breathing pattern during contraction and by a touch. Relaxation may be enhanced through concentration on a specific breathing pattern during contractions or by many modalities of touch and massage, from simple handholding or stroking to massage of specific areas that may help a women cope with labour pain.

Touch conveys to the women “a massage of caring, of comfort, of wanting to be with her and help her.” The most commonly reported types of touch during childbirth included efflurage, holding hands, back rubs and massage.

In a study published in 2004, it was found that 43.6% of women, across a variety of obstetrical and gynaecological clinics used massage therapy. A similar study in South Australia showed that 76.4% of women preferred massage therapy. Additionally, 64.1% of obstetricians and 57.55 of midwives had referred patients for massage therapy. Studies have shown that women who were massaged during labour were less anxious and experienced less pain as well as having shorter labours and less intervention than a control group who did not receive massage during labour.

A retrospective study was conducted to investigate the relationship between antenatal hand massage and intranatal outcome. One hundred and fifty low-risk primigravida women were selected by convenience sampling technique. Results showed that the experimental group had a reduced length of labour in comparison to control group (4811.712, $p<0.05$). So this study revealed that hand massage is effective in reducing the length of labour.

An experimental study was conducted at the SSK Bakirkoy Women and Children's Hospital (Turkey) on the effectiveness of breathing and skin stimulation techniques on pain perception of women in labour. Sample was selected by non- random sampling. The subjects were assigned to two groups, 20 in the experimental and 20 in the control group. Data was obtained through the visual analogue scale, inspection form, observation form and postnatal interview form. Women in the experimental group received nurse administered massage and were encouraged to breathe. The results indicated that the non-pharmacological pain control methods like massage and breathing exercises were effective in reducing the perception of pain by women ($t38=7.213$, $p<0.001$), leading to a more satisfactory birth experience.

During contractions a firmer pressure is often appreciated to counteract the discomfort. Many women especially enjoy having the sacral area of the lower back massaged, especially if they are experiencing a "backache labour" in which contractions are felt mainly in the lower spine from where the nerves supplying uterus emerge.

An experimental study was conducted in Taiwan on the effects of massage on pain during labour. Sixty primiparous women were randomly assigned to either the experimental or the control group. Results showed that in both the groups, there was a relatively steady increase in pain intensity and anxiety level as labour progressed. But the

experimental group had significantly lower pain reactions and reported that massage was helpful in providing pain relief and psychological support during labour.

The investigator during her clinical experience had witnessed many women in labour with severe pain. The investigator felt that a warm touch and relaxation made them comfortable, as it is a natural instinct to rub away hurt and pain, especially true during labour. This has motivated the investigator to take up this study.

1.2. STATEMENT OF PROBLEM

A study to assess the Effectiveness of lower back massage and breathing exercises on reduction of anxiety and pain perception among primigravida mothers during first stage of labour at Deepam Hospitals Limited, Tambaram, Chennai.

1.3. OBJECTIVES

The objectives of the study are :

- To assess the pre-test level of pain and anxiety among primigravida mothers in both experimental and Control group.
- To assess the post test level of pain and anxiety among primigravida mothers in both experimental and control group.
- To Compare the pre-test and post-test level of pain and anxiety among primigravida mothers in both experimental and control group.
- To associate the pre-test post test level of reduction of pain and anxiety among primigravida mothers with selected demographic variables.

1.4. OPERATIONAL DEFINITIONS

1) ***Effectiveness:*** It refers to the extent to which the lower back massage and breathing exercises have impact on the reduction of anxiety and pain perception shown by primigravid mothers in the first stage of labour as measured by the (VAS) Visual Analogue Scale

2) ***Back massage:*** Back massage refers to the massage techniques like efflurage and muscle rolling performed on the lower back of primigravid mothers in the first stage of labour.

3) ***Deep Breathing Exercises:*** It refers to the selected breathing exercises such as cleansing breath and rapid superficial breathing taught to the primigravid mothers during the latent phase of the first stage of labour.

4) ***First stage of labour:*** In first stage of labour refers to the period from 3 cm to 7 cm cervix dilatation.

5) ***Anxiety:*** It refers to the feeling of apprehension, uneasiness or uncertainity caused by anticipation of labour associated events as measured by the anxiety assessment tool.

6) ***Pain perception:*** It refers to the degree of pain a primigravid mother experiences during contractions in the first stage of labour as measured by Visual Analogue Scale (VAS).

1.5. ASSUMPTIONS

The study assumes that:

1) Women in labour experience pain.

2) Back massage and breathing exercise will help to reduce anxiety and pain perception of women in labour.

1.6. HYPOTHESES

H1 : The mean post-test pain score of primigravid mothers in Group I will be significantly lower than that of mothers in Group II.

H2 : The mean post-test anxiety score of primigravid mothers in Group I will be significantly lower than that of mothers in Group II.

H3 : There will be a significant association between post-test anxiety score and pain score of primigravid mothers in Group I and Group II with the selected demographic variable

CHAPTER –II
REVIEW OF LITERATURE

The term review of literature refers to the activities involved in identifying and searching for information on a topic and developing a comprehensive picture of the state of knowledge on the topic.

Review of literature is an integral component of any scientific research. This chapter deals with the review of published and unpublished research studies and non- research literature related to the present study.

The literature reviewed has been organised and presented under the following headings:

- ❖ Labour pain perception.
- ❖ Anxiety during labour.
- ❖ Pharmacological measures of pain relief and its effect on the mother.
- ❖ Alternative and complementary therapies of pain relief and anxiety reduction during labour.
- ❖ Massage, exercises and related studies.
- ❖ Back massage and breathing exercises during labour.

Literature related-to labour pain perception

Waldenstrom V MCLachlante, Dec 2015 A comparative study was conducted in a metropolitan hospital to investigate the experience of childbirth, including recollection of pain and use of pain relief during labour. Sample consisted of 100 Vietnamese-born, 100 Turkish-born, and 100 Austra1ian-born women who had normal vaginal birth and gave

birth to a healthy baby. Data was collected by interview method within 24 hours after the birth. The result showed that Vietnamese women used less pain relief, reported more pain, and described overall childbirth experience more negatively than did Australian women, while also reporting less anxiety, more confidence and less panic during labour. Turkish women's responses were more similar to those of Australian women, but they were slightly more satisfied with childbirth. The results revealed that women's responses to childbirth were associated with cultural background and the sensitivity of perceiving pain.

Lowe NK , J Obstet Gynaecol,May 2014 In a comparative study of 194 American women and 152 Dutch women who delivered in two university hospitals, differences in the experience of labour pain were noted. Sixty-one percentage of the Dutch women and, 16% American women received no pain medication during labour. There was no difference between the groups in postpartum ratings of labour pain (34.9% vs. 3 6.6%) as painful as expected. The American women expected labour pain more painful and expected to require more medications to manage the pain of labour. The Dutch women saw 'birth as a natural process and were biased against any sort of interference. This study revealed the important influence of culture on expectation and attitudes towards labour pain.

Lowe NK, J Obstet Gynaecol, May 2014 A randomised clinical trial of 617 birth centre care and 613 standard in- hospital care births in Sweden was conducted to elicit their childbirth experience. No difference in postpartum attitude to pain or among multipara women in the intensity of pain experienced, was found between the two groups of women even though both primi and multipara in the standard care group used significantly more pharmacologic pain relief (epidural, pethidine, entonox, pudendal block) than was used by the women in birth centres. These findings highlight not only the distinction between pain intensity

and attitude towards pain experienced but also the independence of the quality of the birth experience from the availability of pharmacologic pain intervention.

Literature related to anxiety during labour

Bastini F ,Hidarnia A , April 2016 A randomised controlled study was conducted in Iran to determine whether relaxation education in anxious pregnant Iranian women in their first pregnancy affected selected pregnancy outcomes: birth weight, preterm birth and surgical delivery rate. The sample comprised of 110 obstetrically and medically low risk primigravid women, each randomly assigned into experimental and control group. Data was collected by Spielberger's State Trait Anxiety Inventory. The results showed that significant reduction in low birth weight, caesarean section and instrumental extractions were found in the experimental group compared to the control group. So the results revealed that the effects of nurse-led relaxation education sessions during the prenatal period serve to improve pregnancy outcome in women with high anxiety.

Berele J,Mykletum A, Sep 2015 was conducted in Norway to determine the effects of anxiety and depression in pregnant women on neonatal outcomes. Six hundred and eighty pregnant women were selected. Women rated themselves on the hospital anxiety and depression rating scale (HADS). Outcome variables were gestational length, birth weight and Apgar scores. The results showed that HADS-defined anxiety during pregnancy was associated with lower Apgar score at one minute (score<8; OR=2.27; p0.03) and five minutes (score<8; 0R4.49; pO.Ol6). Anxiety and depression was associated with low birth weight or preterm delivery. So the study revealed that anxiety or depression during pregnancy were float strong risk factors for adverse neonatal outcomes, although low Apgar score in offspring of women with anxiety may indicate poor neonatal adaptation.

Pharmacological measures of pain relief and its effect on the mother

Ellis L carol D, May 2015 does experimental study was conducted to examine the effectiveness of epidural analgesia during labour pain in 318 subjects (Group I: 60-only fentalin; Group II: 60-fentalin 10-20 ml epidural, i.e., after 4 cm dilatation of cervix; and Group III: 198- without analgesia. The result showed that there was no difference in the duration of first and second stage of labour, and Apgar score. Group III had high caesarean section rate when compared to Group I and II. VAS throughout the labour was low in Group I and II and slight high in Group III during the first stage of labour.

Anna- Berit R A, Ann- Sofi M, Gunilla L, March 2016 does an evaluative study was performed to assess the effects of different types of analgesia during labour on the development of spontaneous breast feeding movements, crying behaviour and skin temperature during the first hours of life in healthy term newborns. A sample of 28 mothers participated in this study. Group I mother (n10) received no analgesia, Group II (n=6) received mepivacaine via pudendal block and Group III (ii=12) received pethidine or bupivaine or more than one type of analgesia during labour. Video recording showed a significantly lower proportion of the infants in Group II and III touched nipple with their hands before sucking, made poor licking movements and sucked the breast ($p<0.01$). Nearly 50% of the infants in Group II and III did not breastfeed within the 4 hours of life; they had a higher temperature and they cried more than the Group I infants. The study revealed that the analgesic during labour disturbs a newborn's behaviour.

Shiner E , Shoham , Vardi I, Sep 2015 did a prospective study was conduced to characterise parturients who prefer to deliver without the use of analgesia. The data was collected from 446 study population using a structured questionnaire. The report showed women who undertook labour without analgesia to be significantly older, with higher

birth order, and to be of lower educational level than the control group. Women who refitted analgesia had experienced and expressed lower degree of pain (mean, VAS score 7.4 and 6.7) than those who consented to analgesia (mean VAS score = 8.6 and 8 respectively; P<0.001).

Alternative and complementary therapy of pain relief and anxiety reduction during labour

Smith C A, Colline C T, 2016 a study was conducted in Australia to examine the effectiveness of complementary and alternative therapies on pain management in labour. The sample comprised of 366 women: 100 women involved in acupuncture, 25 in audio analgesia, 22 in aromatherapy, 189 in hypnosis, and 30 for music. The results revealed that the trial of acupuncture decreased the need for pain relief interval from 0.39 to 0.81. Women receiving hypnosis were more satisfied with their pain management in labour compared to controls. The study concluded that acupuncture and hypnosis were more beneficial than other methods in management of pain during labour.

Waters BL , Raisler J, Sep-Oct 2015 was conducted in USA to assess the use of ice massage at 'the acupressure energy meridian point of the large intestine to reduce labour pain during contractions. A one-group pre-test post-test design was chosen which used 100 mm visual analogue scale (VAS) and the McGill Pain Questionnaire (MPQ) ranked numerically and verbally to measure pain levels. Results showed a pain reduction mean on the VAS of 28.22 mm on the left hand and 11 .93 mm on the right hand. The post-delivery ranked MPQ dropped from number 3 (distressing) to number 2 (discomforting). So the study revealed that ice massage is a safe, non-invasive, non-pharmacological method of reducing labour pain.

Phumdoung S , Good M, June 2016, a randomised controlled study was conducted to examine the effects of music on sensation and

distress of pain in Thai primiparous women during the active. phase of labour. The sample comprised of 55 subjects each in the experimental and control group. Dual visual analogue scales were used to measure sensation and distress of pain. The results showed that the experimental group had significantly less sensation and distress of palm than did the control group (fl8.68, p<0.001, effect size=0.15; f14.87, p<0.001, effect size=0.12 respectively). Sensation and distress significantly increased across the 3 hours in both groups (p0.001), except for distress in the music group during the first hour. So the study revealed that music-a mild to moderate strength intervention — consistently provided significant relief of severe pain across 3 hours of labour and delayed the increase of affective pain for one hour.

Jackson D J, Lang JM, Heeren T ,March –April 2015, a randomised pre-test, post-test control group study was conducted to identify the psycho-physiological effects of hydrotherapy on maternal anxiety and pain during labour. Sample size was 18. In experimental group 15-minute bathers' anxiety and pain scores were decreased compared to non-bathers. The findings offered support for the therapeutic effects of warm water bathing in labour for acute, short-term anxiety and pain reduction.

Ramnero A, hanson V, Kilhren M, June 2016 a randomised controlled trial was done to investigate the effect of acupuncture treatment during labour with regard to pain intensity, degree of relaxation and outcome of delivery. Forty-six parturients were randomised to acupuncture treatment and 44 parturients were in control group who received conventional analgesia. The result revealed that acupuncture treatment during labour significantly reduced the need for epidural analgesia (12% vs. 22%). Acupuncture group marked a significantly better degree of relaxation compared to the control group (mean difference 0.93, 95%, CI=1.66 to 0.20).

Harmsworth G, Dhanjal MK, July 2016 a retrospective case control study was conducted to document the practice of water births and compared their outcome over a five year period from 1989 to 1994 at the maternity unit Rockford Hospital, South End, UK. A sample of 301 women was included in both the groups. Primigravidae having water births had shorter first and second stage of labour compared to controls ($P<0.05$ and $P<0.005$ respectively). All women having water births had reduced analgesia requirements. No analgesia was requested by 38%, and 1.3% requested for opiates compared to 56% of the controls. This study highlighted the fact that water birth is associated with reduction in length of labour and a reduction in analgesic requirements for all women.

Burns E, Blamey C, Loyd AJ, Feb 2015 An observational study was conducted on the use of aroma therapy in intrapartum midwifery practice. The study took place over a period of 8 years and 8,058 mothers used aroma therapy. A total of 10 essential oils were used. The findings of the study suggested that two essential oils clarisage and chamomile were effective in alleviating pain. The evidence from this study suggests that aroma therapy can be effective in reducing maternal anxiety, fear and/or pain during labour. The use of aroma therapy appeared to facilitate a further reduction in the use of systemic opioids from 6% in 1990 to 4% in 1997 (per woman)32.

Staly L Y, April 2015 a randomised controlled study was conducted to assess the effectiveness of non-pharmacological approaches for relief of pain during labour. The sample comprised of 34 women in labour randomly assigned to receive one of the three treatments: intracutaneous sterile water injection (ISW), intracutaneous electrical nerve stimulation (TENS), and standard care including back massage and whirlpool bath. The VAS scale was used to assess pain. The results showed that women in the standard care group rated the

intensity and unpleasantness of pain during the experimental period as significantly lower than women in the ISW group or TENS group, (p=0.001 and p=0.003 respectively). Similar results were observed for intensity (p=0.0l) and unpleasantness (p0.03) of pain assessed just before delivery. Mean pain intensity assessed at 15 and 60 minutes after randomisation was significantly reduced n the standard care group compared to the two other groups. So the study concluded that standard care was more effective in terms of reduction in pain than the other two methods, but there was no significant difference in the three groups in the level of control and satisfaction with labour and delivery.

Cogan R, Spinnato J.2015 An experimental study was conducted in Texas on social support during premature labour to find out the effect of continuous labour support in relation to the outcome of labour in terms of duration, pain relief and neonatal safety. In the experimental group (ns14) the duration of labour - latent phase 6.9 hours, active phase 2.4 hours and transition phase 0.7 hours, whereas in control group (n1 1) it was 13.4 hours, 4.2 hours and 2.3 hours respectively. In control groups 43% ended up in prolonged labour hut no single case was reported in experimental group. Narcotics were used by 43% in experimental group and 82% in control group. No change in distress was reported in both the groups hut the mean Apgar score at 5 minutes was 8.7 in experimental group and 7.4 in control group. The study showed that continuous support during labour may reduce pain and improve other obstetric outcomes.

Massage, exercises and related studies

Garshabi A, Faghihs Aug 2016 A prospective randomised study was conducted to investigate the effect of exercise during pregnancy on the intensity of low back pain. The sample comprised of 107 women participated in an exercise programme and 105 in control group. The result showed that low back pain intensity increased in the control

group. The exercise group showed significant reduction in the intensity of low back pain after exercise ($p<0.0001$). So the study concluded that exercise during second half of the pregnancy significantly reduced the intensity of low back pain.

Homer C, Dahcente A randomised prospective study was conducted in Watford General Hospital to study the effects of antenatal perineal massage on subsequent perineal outcomes at delivery. The sample comprised of 861 nulliparous women. The results showed that the group assigned to massage with the group assigned to no massage showed a reduction of 6.1% in second or third degree tears or episiotomies. This corresponded to tear rates of 75.1% in the no massage group and 69% in the massage group ($p=0.073$). There was a corresponding reduction in instrumental deliveries from 40.9% to 34.6% ($p=0.094$). The study concluded that the antenatal perineal massage appeared to have some benefit in reducing second and third degree perineal tear.

Grealish I, Lomasney A. A quasi-experimental study was used to measure the effect of foot massage on the subjective experiences of pain, nausea and relaxation among cancer patients admitted in a cancer hospital in southern Norway. The results of the study revealed that the mean pre-treatment pain score decreased from 25.1 to 15.3 ($t_{56}=85.979$, $p=0.01$). The mean pre-test nausea score decreased from 17.5 to 11.1 ($t_{87}=3.117$; $p=0.001$); the mean pre-test relaxation score increased from 31.8 mm to 54 mm ($t_{87}=7.47$;$P=0.0001$) The study revealed that foot massage was effective in pain reduction and increase in relaxation.

Field T, Grizzle N. A quasi-experimental study was conducted to determine the effect of back massage on depressed and adjust mentally disordered adolescent children admitted to a psychiatric hospital in California. The sample comprised of 26 subjects each in the

experimental and control group. The study showed that in the experimental group the mean post-test anxiety score (27.3) was less than the mean pre-test anxiety score (34.7) and the percentage of sleep time in post-test (82.1%) was more than the pre-test sleep time percentage (79.7%). So the study concluded that back massage was effective in reduction of anxiety and to provide relaxation.

Back massage and breathing exercises during labour

Padmavathi R. Dec 2014 A quasi-experimental design with the non-equivalent control group was used to assess the effectiveness of back massage on pain relief during first stage of labour among expectant mothers of Raichur. Convenient sampling technique was used for selection of 60 samples, 30 each in experimental and control group. Data was collected by structured interview schedule and visual analogue scale to assess the pain, Zung Self-Rating Anxiety Scale to assess anxiety and fatigue severity scale to assess the fatigue. The results showed that the pre-test mean score of pain in experimental group was almost same (4.53±0.82) as the control group (4.63±0.81) and obtained 't' value was 0.45, whereas in the post-test mean pain scores in experimental group(5.69±1.30) was lower compared to the control group(8.75±2.6) and 't' value was 4.25. So the study revealed that the continuous back massage hourly from the beginning till to the end of the first stage of labour have significantly helped in reducing the intensity of labour pain.

Chang MY,Chen CH,Huang KF A randomised controlled study was conducted to describe the characteristics of pain during labour with or without massage. Sixty primiparous women in labour were randomly assigned to either a massage control group and tested using a self-reported Short-Form McGill Pain Questionnaire at 3 phases of cervical dilatation. The study showed that in both groups as cervical dilation increased, there was significant increase in pain intensity. Massage less

pain intensity at phase I and phase 2, but there was no significant difference between the groups at phase 3. The result of this study indicates that although massage cannot change the characteristics of pain experienced by the women in labour. It can effectively decrease labour pain intensity at phase 1 and phase 2 of cervical dilatation during labour.

Nabb MT, Kimber L, Haines A Aug 2016 An experimental study was conducted in Taiwan to assess whether massage coupled with breathing exercises would have more positive effects than breathing exercises alone during labour. The study sample consisted of 28 women who were randomly assigned to the intervention group (massage therapy with breathing exercise-MT) and the control group (breathing exercise alone). The results of this study indicated that massage therapy reduced stress and pain during labour. The intervention group reported less depressed mood than the control (MT:. decrease of 7.1, control: increase of 0.5; $p<0.05$) and had lower stress levels. In terms of labour pain, only the massage therapy group experienced decrease in labour pain ($p<0.001$). Additionally, the massage therapy group was the only group to decrease the anxiety levels. Findings also showed that women in the intervention group were in labour for an average of 8.5 hours compared to average of 11.3 hours of the control group ($p<0.05$). So the study concluded that massage therapy when given with breathing exercises reduces the stress during labour and increases the quality of women's experience of childbirth.

Crasta PW 2014 An experimental study was conductd in a teaching hospital of Mangalore to determine the effectiveness of lower back massage on pain and behavioural responses of Women in the first stage of labour admitted to the labour unfit. The sample comprised of 40 women in the first stage of labour that was selected using purposive sampling technique. The subjects were randomly assigned to an

experimental group that received back massage and control group. The findings of the study revealed that there was significant difference between the degree of pain perceived by the labouring women in Group I and Group II in the first stage of labour ($t38=28.62$, $P < 0.05$). There was significant difference between the behavioural responses of women in Group I and Group II in the first stage of labour ($t3827.49$, $P < 0.05$). The study concluded that back massage was effective in decreasing the pain and favourable behavioural responses of women in the first stage of labour.

Saldanha H.2014 A quasi-experimental study was conducted to determine the effectiveness of breathing exercises on the duration, outcome of labour, and behaviour responses of gravid women during the first stage of labour in a selected hospital at Mangalore on a sample of purposively selected 40 gravid women randomly assigned to Group I and Group II. The sample in Group I was administered breathing exercises in the first stage of labour either during safe confinement or before 3 cm cervical dilatation. The results revealed that there was significant difference in the duration of the second stage of labour in primigravida in Group I and Group II ($t152.586$, $P <0.05$) but no difference was observed in second gravida ($t18=0.091$, $P > 0.05$). There was no significant association between breathing exercises and the mode of delivery.

Sharma R, Sunija A, Jaswal R. A study was conducted on the effect of antenatal breathing exercises on maternal blood gases and fetal heart patterns. The study was conducted on women of more than 30 weeks of gestation during and after conventionally advocated slow deep breathing exercises and to determine their effect on the fetal heart patterns, it was observed that none of the blood gas or CTG parameters increased or decreased to levels harmful to the fetus, though maternal blood gas parameters recovered faster as compared to fetal CTG after

exercise. Results, therefore, imply that deep breathing exercises, if recommended, may be done with caution as the changes may be persistent in some patients.

Mei-Yach C, Shing-Yaw W, Chung HC.Apr 2015 A randomized controlled study was conducted in Taiwan in 1999-2000 to find the effect of massage on pain and anxiety during labour. Sixty primiparous women expected to have normal childbirth were randomly selected. Nurse-rated present behavioural intensity (PBI) was used to measure the labour pain and visual analogue scale (VAS) for anxiety measurement. The intensity of pain was compared in the latent, active, and transient phases. The study results showed a significantly lower P81 scores in the massage group (0.73, 1.73 and 2.13) than in the control group (1.30, 1.73, and 2.87) at phase 1, 2 and 3 of labour respectively. Significant differences in VAS mean at phase 1 (massage group: 37.20 and control group: 53.47) indicated differences in anxiety level. At latent phase 't' demonstrated significant lower pain reaction in massage group. Eighty-seven percent clients reported decreased anxiety and feeling of psychological support during labour. The study concluded that massage was cost effective nursing intervention that can decrease pain and anxiety during labour.

Basil R. 2001 A study was conducted to evaluate the effectiveness of back massage and breathing exercises on pain relief in primigravid mothers during the first stage of labour in a selected hospital at Delhi. The sample comprised of 26 each in experimental and control group, who were selected by purposive sampling. A standardised pain assessment tool was used to collect the data. Data was analysed using descriptive and inferential statistics. The results showed that back massage and breathing exercises were found to be effective non-pharmacological measure for reducing the intensity of labour pains in prirmi mothers.

Jayasudha A. 2015 An evaluative study was conducted to determine the effect of selected antenatal exercises on outcome of labour in primigravid women in selected DK district hospital. A quasi-experimental non-equivalent group was adopted by using purposive sampling technique. The sample consisted of sixty primigravid women, thirty each in experimental and control groups. Teaching was given at the clinic and practice of exercises monitored. Data was collected during labour by an observation checklist, The findings of the study showed that the total duration of labour and standard deviation in experimental group was 11.08±6.646 hours whereas in the control group it was 19.38±13.79 hours. In the experimental group 95.29% of women demonstrated positive behavioural responses whereas in the control group 14.29% of women demonstrated positive behaviour response. The study concluded that the practice of antenatal exercises have a positive effect on outcome of labour.

Saldanha H. 2014 A quasi-experimental study was conducted to determine the effectiveness of breathing exercises on duration, outcome of labour, and behavioural response of gravid women during the first stage of labour. The sample comprised of 20 subjects each in experimental and control group, selected by purposive sampling technique.Data was collected using a structured observation checklist. The results showed the mean percentage scores for the behavioural responses of women in the experimental group to be higher (94.04%) than that of the control group (62.55%). There was significant difference in behavioural responses of women in labour in both experimental and control group (t3=23.19, p=<0.05), and also a significant difference in the duration of the first stage of labour in prirnigravid mothers (t_{18}=2.40, p<0.05). The results revealed that breathing exercises during labour are effective in reducing the duration and outcome of labour.

CONCEPTUAL FRAMEWORK

Conceptual framework is theoretical approach to the study of problems that are scientifically based and emphasises the selection, arrangement and classification of its concepts. Conceptualisation is a process of forming ideas, design and plans.

The conceptual framework used to in the present study is based on Callista Roy's Adaptation Model (1984), which views the individual as an adaptive system, who functions as a whole, through the interdependence of subjects. An individual's behaviour is based on the input, throughput output .

In this study, the **input** process includes the demographic variables like age, Sex, Educational Status, Occupation, Family Income, Marital status, Type of family. In obstetrical variable like Pregnancy pattern, Gestational age, Duration of marital life, Menstrual history, Number of Antenatal visits. Pre-intervention assessment done on reduction of anxiety and pain perception. Assessment was done by using Visual Analogue Scale and Anxiety Assessment Scale.

In the input process, experimental group receives lower back massage and breathing exercises on delivery process whereas control group doesn't receive lower back massage and breathing exercises.

Throughput process includes the administration of lower back massage and breathing exercises in experimental group and routine care in control group. Assessment of reduction of anxiety and pain perception after lower back massage and breathing exercises in experimental group and assessment of anxiety level and pain perception in control group is identified.

Post assessment of reduction of anxiety and pain perception both in experimental and control group was done by using Visual Analogue Scale and Anxiety Assessment Scale.

Output is the process of evaluating the effectiveness of lower back massage and breathing exercises on reduction of anxiety and pain perception among primigravida mothers in the first stage of labour. Changes in anxiety level and pain perception status in experimental group. For the control group, it is predicted there would be no significant change in anxiety level and pain perception status.

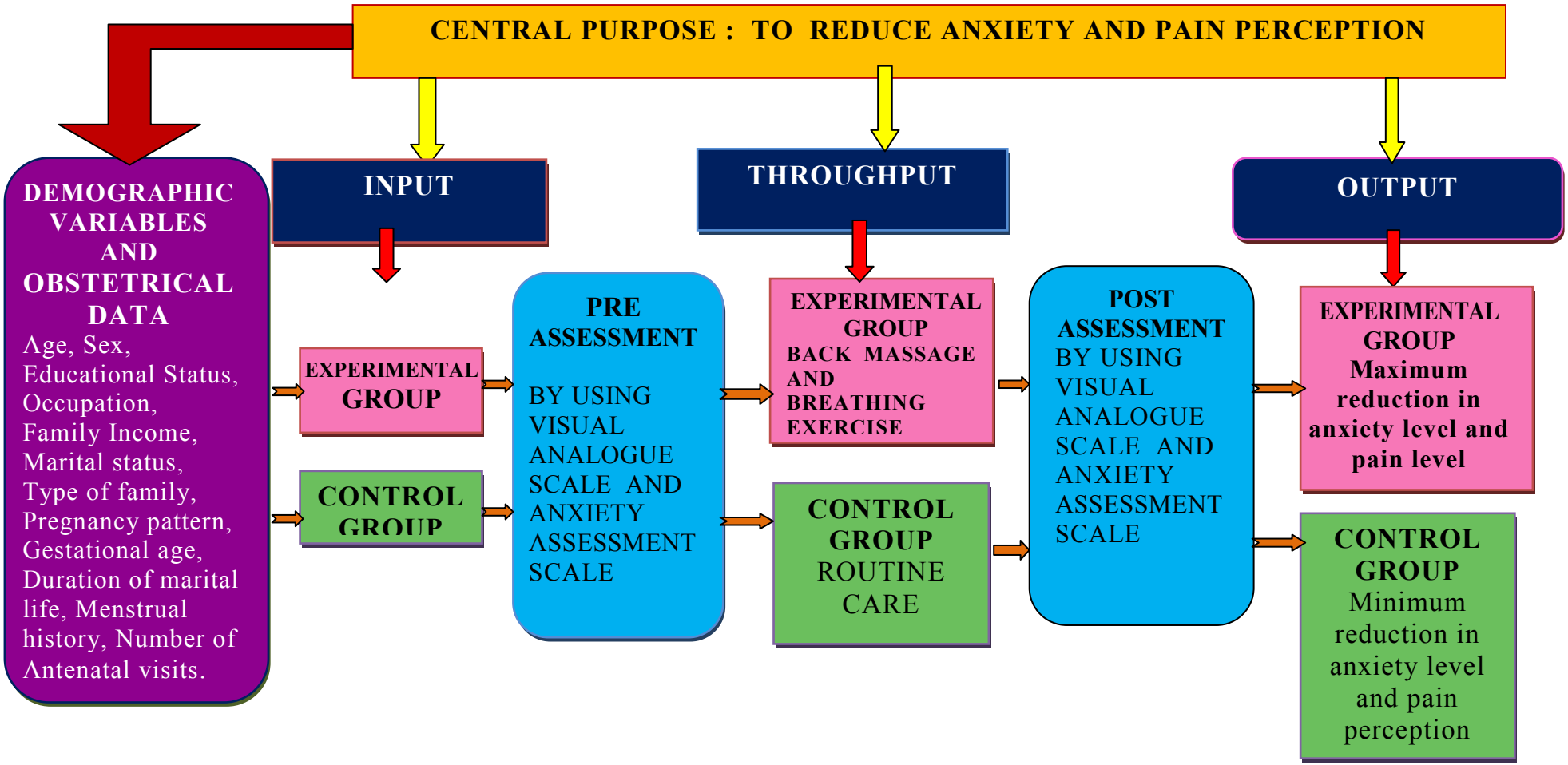


FIG – 2 CONCEPTUAL FRAME WORK BASED ON ROY'S ADAPTATION MODEL (1984)

CHAPTER - III
RESEARCH METHODOLOGY

Research methodology is the systematic way of doing a research to solve a problem. It is concerned with the steps, procedures and strategies for gathering and analysing the data in research investigation. It includes the collection, assembling and examining of available data, testing the assumptions and developing practical application from the laws or principles that have been derived from the verification of the assumption.

This chapter deals with methodology selected by the investigator to study the effectiveness of lower back massage and breathing exercise on reduction of anxiety and pain perception among primigravid mothers during the first stage of labour in selected hospital at IOG

3.1. RESEARCH APPROACH

Research approach indicates the basic procedure for conducting research. The choice of appropriate approach depends on the purpose of the study. In this study, **a quasi-experimental research approach** was used and the subjects were selected by **purposive sampling method**; allotment of the groups was done by random assignment.

3.2. RESEARCH DESIGN

A researcher's overall plan for obtaining answers to the research questions or for testing the research hypothesis is referred to as research design.The research design adopted for the study **quasi-experimental post-test-only control group design.**

3.3. RESEARCH VARIABLES

Variables of the study

A variable is anything that can change or anything that is liable to vary. Two types of variables were identified in this study. They are Independent and Dependent.

Independent variable

An independent variable is the variable that stands alone and is not dependent on any other. In this study it refers to the lower back massage administered and breathing exercises taught to the primigravid mothers in the first stage of labour in Group-I.

Dependent variable

Dependent variable is the effect of the action of the independent variable and cannot exist by itself. In this study, it refers to labour pain and anxiety of primigravid mothers.

Extraneous variables

A variable that confounds the relationship between the independent and dependent variables that needs to be controlled either in the research design or through statistical procedure. In this study it refers to age, education, occupation, income, religion and gestational age of the primigravid mothers in the first stage of labour.

3.4. THE SETTING OF THE STUDY

The study is conducted in labour room, at Deepam Hospital Limited, Tambaram, Chennai.

3.5. POPULATION

The population includes all the primigravid mothers above 37 weeks of gestation with the true labour pain admitted in labour ward, at Deepam Hospital Limited, Tambaram, Chennai.

3.6. SAMPLE

The study samples are primigravida mothers who fulfill the inclusion criteria.

3.7. SAMPLE SIZE

The sample for this study consisted of 60 primigravid mothers (30-Control group, 30-Experimental group) with cervical dilatation 3-7cm as per vaginal finding, having 3 contractions in 10 minutes lasting for 30-40 seconds.

3.8. SAMPLING TECHNIQUE

Sampling is the process of selecting a portion of the population to obtain data regarding a problem. In this study the investigator had used purposive sampling technique and random assignment of the subjects.

3.9. CRITERIA FOR SAMPLE SELECTION

Inclusion criteria

Primigravid mothers with:

- 38-40 weeks gestation in the first stage of labour.
- Cervical dilatation between 3-7cm
- 3 contractions in 10 minute
- Mothers with ability to understand Tamil or English

Exclusion Criteria

- Mulitipara mothers
- High risk mothers.
- Mothers with obstetrical complications
- Mothers with medical complication

3.10. DEVELOPMENT AND DESCRIPTION OF TOOL

Extensive review of literature on the relevant topics, discussion with experts and self experience of the investigator helped in the development of the tools for the data collection.

A standardized Visual Analogue Scale was used for assessing the pain, and the researcher developed the Anxiety Assessment Tool for assessing the anxiety of primigravid mothers in the first stage of labour.

Description of Tool

It has four sections A, B and C,D

Section-A: Demographic variable.

Section-B: Obstetrical variable

Section-C: Visual Analogue Scale,

Section-D: Anxiety Assessment Tool

3.11. ETHICAL CONSIDERATION

All respondents were carefully informed about the purpose of the study and their part during the study and how the privacy is guarded. Ensured confidentiality about the study result. Thus investigator followed the ethical guidelines, which are issued by the research committee.

3.12. TESTING OF THE TOOL

a) Content Validity

Validity of the tool was assessed using content validity. Content validity was determined by experts from Nursing and Medical. They suggested certain modifications in tool. After the modifications they agreed this tool for assessing the effectiveness of lower back massage,

breathing exercises on reduction of anxiety and pain perception among primigravida mothers during first stage of labour

b) Pilot Study

A formal permission was obtained from the Director, Deepam Hospital Limited, Tambaram, Chennai. The pilot study was done for the period of one week with 10 samples using simple random sampling technique. Among ten primi mothers, five mothers were in experimental group and five primi mothers were in control group. Analysis of the findings showed high consistency and feasibility of the study and after which the plan for actual study was made.

c) Reliablity

After pilot study reliability of the tool was assessed by using test interrater method and its correlation coefficient r –value value is 0.82,0.90 This correlation coefficient is very high and it is good tool for assessing the effectiveness of lower back massage, breathing exercises on reduction of anxiety and pain perception among primigravida mothers during first stage of labour

3.13. DATA COLLECTION PROCEDURE

Formal permission was obtained from the director, Deepam Hospital Limited, Tambaram, Chennai. The data collection was done for a period of 4 weeks. A brief introduction about the study was given to the mothers and reassured that the data collected would be kept confidential. Back massage, breathing exercise were provided after getting consent from the mothers. Sample was selected as per the sampling criteria and divided into Group I and Group II by random assignment. The investigator ensured that the data collection process would not affect the routine of the ward. Group I received lower back massage and breathing exercise from the investigator while Group II did not receive any procedure. The degree of pain perception and anxiety levels of the subjects in Group I and Group II were assessed with VAS and

Anxiety Assessment Tool on two observations. Data collection was terminated after thanking each of subjects.

3.14. PLAN FOR DATA ANALYSIS

Demographic variables in categorical/dichotomous were given in frequencies with their percentages.

Pain score and anxiety score were given in mean and standard deviation.

Difference between Experimental and Control group was analysed using student independent t-test .

Association between level of Pain score / anxiety score reduction and demographic variables are calculated using chi square test.

Correlation between Pain score and anxiety score was analysed using karl pearson correlation coefficient.

Differences between Experimental and Control group score was analysed using mean difference with 95% Confidence interval and proportion with 95% confidence interval.

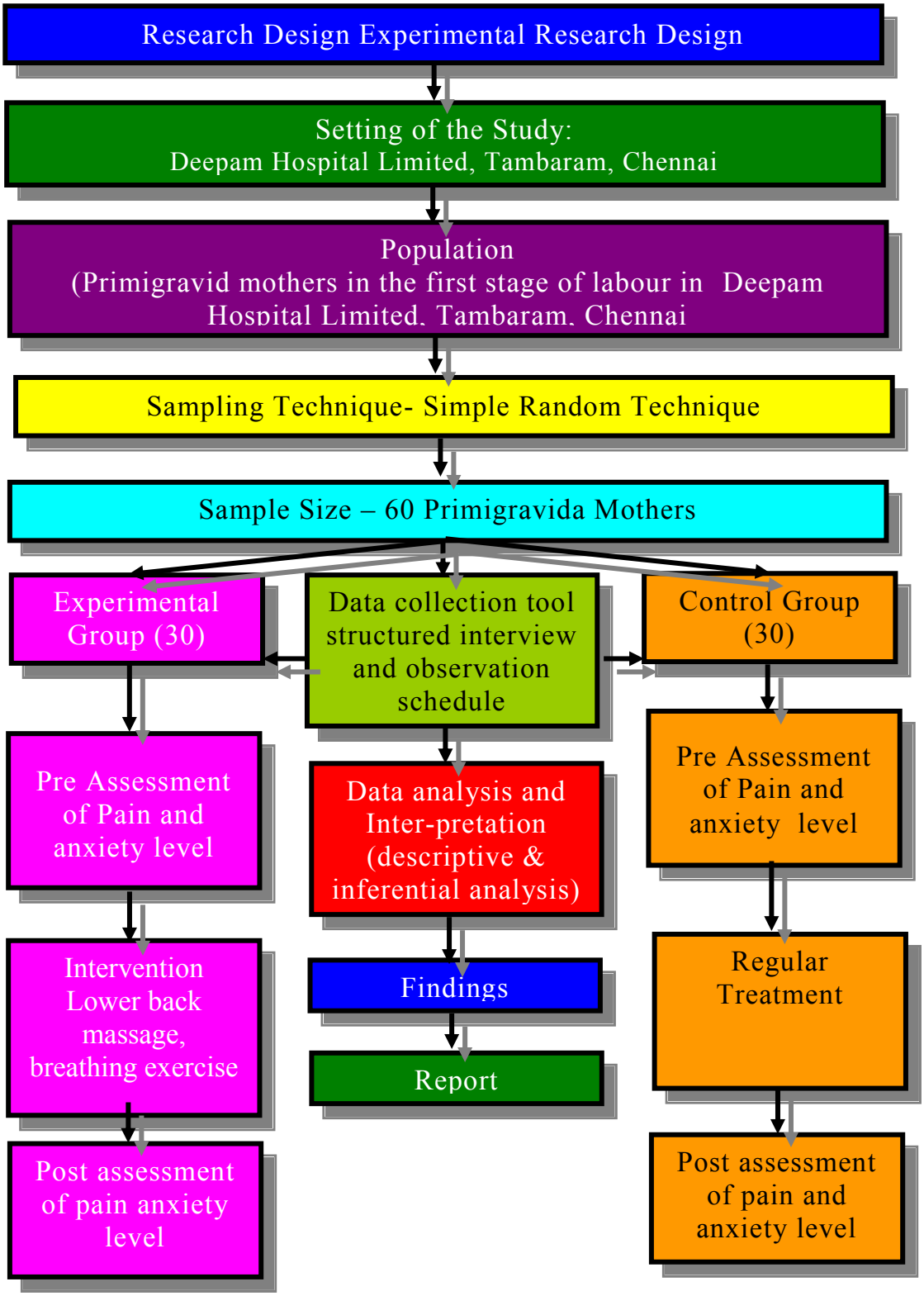
Multiple bar diagram, Scatter plot with regression estimate were used to represent the data .

$P<0.05$ was considered statistically significant.

PROTECTION OF HUMAN SUBJECTIVES

The research proposal was approved by the experts prior to the pilot study and permission for the main study was obtained from the Director, Deepam Hospital Limited, Tambaram, Chennai. Permissions was also obtained from Chief of Labour Room. An informed concern was obtained from each study subject before starting the data collection. Assurance was given to the patients that confidentially and privacy would be maintained.

FIGURE-2: SCHEMATIC REPRESENTATION OF RESEARCH METHODOLOGY



CHAPTER – IV
DATA ANALYSIS AND INTERPRETATION

Analysis is the appraisal of the data and interpretation of the data consisting of relation between the findings of the study to the research problem and theoretical framework of the study. An important function of the process of interpretation is to link the findings of the study to the main stream of scientific knowledge in the field.

This chapter deals with the analysis and interpretation of data collected from mothers of primigravida in first stage of labour, labour unit, Deepam Hospital Limited, Tambaram Chennai.

The data collected from 60 samples(30 Experimental, 30 Control) of primigravida mothers in first stage of labour are being analyzed, classified and tabulated on the basis of the objectives of the study.

ORGANISATION OF DATA

Section-A : Distribution of the subjects according to their demographic profiles

Section-B : Distribution of the subjects according to their Obstetric History

Section-C : Pre-test level of anxiety and pre test pain level

Section-D : Post-test level of anxiety and post test pain level

Section-E : Comparison of pretest and post test level of anxiety and level of pain

Section-F : Effectiveness of lower back massage, breathing exercises on anxiety and pain reduction

Section-G : Association between level of Anxiety reduction score and demographic variables(Experiment)

SECTION -A

Table-1: Demographic Profile

Demographic information		Group			
		Experiment		Control	
		n	%	n	%
Age	20 -25 yrs	15	50.0%	11	36.7%
	26 -30 yrs	10	33.3%	11	36.7%
	31 -35 yrs	5	16.7%	8	26.7%
Education	Primary	9	30.0%	7	23.3%
	Secondary	8	26.7%	8	26.7%
	Collegiate	8	26.7%	9	30.0%
	Non formal	5	16.7%	6	20.0%
Occupation	Home maker	9	30.0%	6	20.0%
	Sedentary	7	23.3%	11	36.7%
	Moderate	10	33.3%	10	33.3%
	Heavy worker	4	13.3%	3	10.0%
Religion	Hindu	10	33.3%	8	26.7%
	Muslim	10	33.3%	10	33.3%
	Christian	8	26.7%	9	30.0%
	Others	2	6.7%	3	10.0%
Income	Rs.1000 -2000	7	23.3%	8	26.7%
	Rs.2001 -3000	10	33.3%	9	30.0%
	Rs.3001 -4000	7	23.3%	7	23.3%
	>Rs.4001	6	20.0%	6	20.0%
Type of Marriage	Consanguineous marriage	16	53.3%	17	56.7%
	Non Consanguineous marriage	14	46.7%	13	43.3%

Demographic information		Group			
		Experiment		Control	
		n	%	n	%
Type of Family	Nuclear family	13	43.3%	14	46.7%
	Joint family	17	56.7%	16	53.3%
Supportive Person	Husband	8	26.7%	8	26.7%
	Parents	11	36.7%	12	40.0%
	Neighbours	11	36.7%	10	33.3%
Pregnancy Pattern	Planned	12	40.0%	13	43.3%
	Unplanned	18	60.0%	17	56.7%
Locality	Urban	15	50.0%	14	46.7%
	Rural	15	50.0%	16	53.3%

Table I Showed that among the participants in Experimental group half of the participants (50%) are between 20-25 years, below half of the (33.3%) participants are between 26-30 years & very minimal participants (16.7%) was between 31-35 years.

Considering the educational status, majority of mothers 9 (30%) completed primary education in experimental group and majority of mothers 9 (30%) completed college in control group.

Regarding the occupation majority of mothers10(33.3%) were moderate workers in experimental group and most of the mothers 11(36.7%) were sedentary workers in control group.

In regard to the religion, most of the mothers 10 (33.3%) belonged to Hindus and 10(33.3%) are muslims in Experimental group and most of the mothers 10 (33.3%) belonged to muslims in control group.

Considering the income, majority of mothers 10 (33.3%) were getting a family income of Rs.2001-3000 in experimental group and most of the mothers 9 (30.0%) were getting a family income of Rs. 2001-3000 in control group.

Regarding the type of marriage, majority of mothers 16(53.3%) have consanguinity in Experimental group and most of the mothers 17 (56.7%) have consanguinity in control group.

Considering the type of family, majority of mothers 17(56.7%) belonged to joint family in experimental group and most of the mothers 16(53.3%) belonged to joint family in control group.

In considering the supportive person, 11(36.7%) were husbands and 11(36.7%) were neighbours in experimental group and majority of them 12(40.0%) were parents in control group.

In regard to the pregnancy pattern majority of mothers, 18(60%) had unplanned pregnancy in experimental group and majority of mothers 17 (56.7%) had unplanned pregnancy in control group.

Considering the locality half of them 15(50%) were from urban area and the remaining half were from rural area in experimental group and majority of them 16(53.3%) were from rural area.

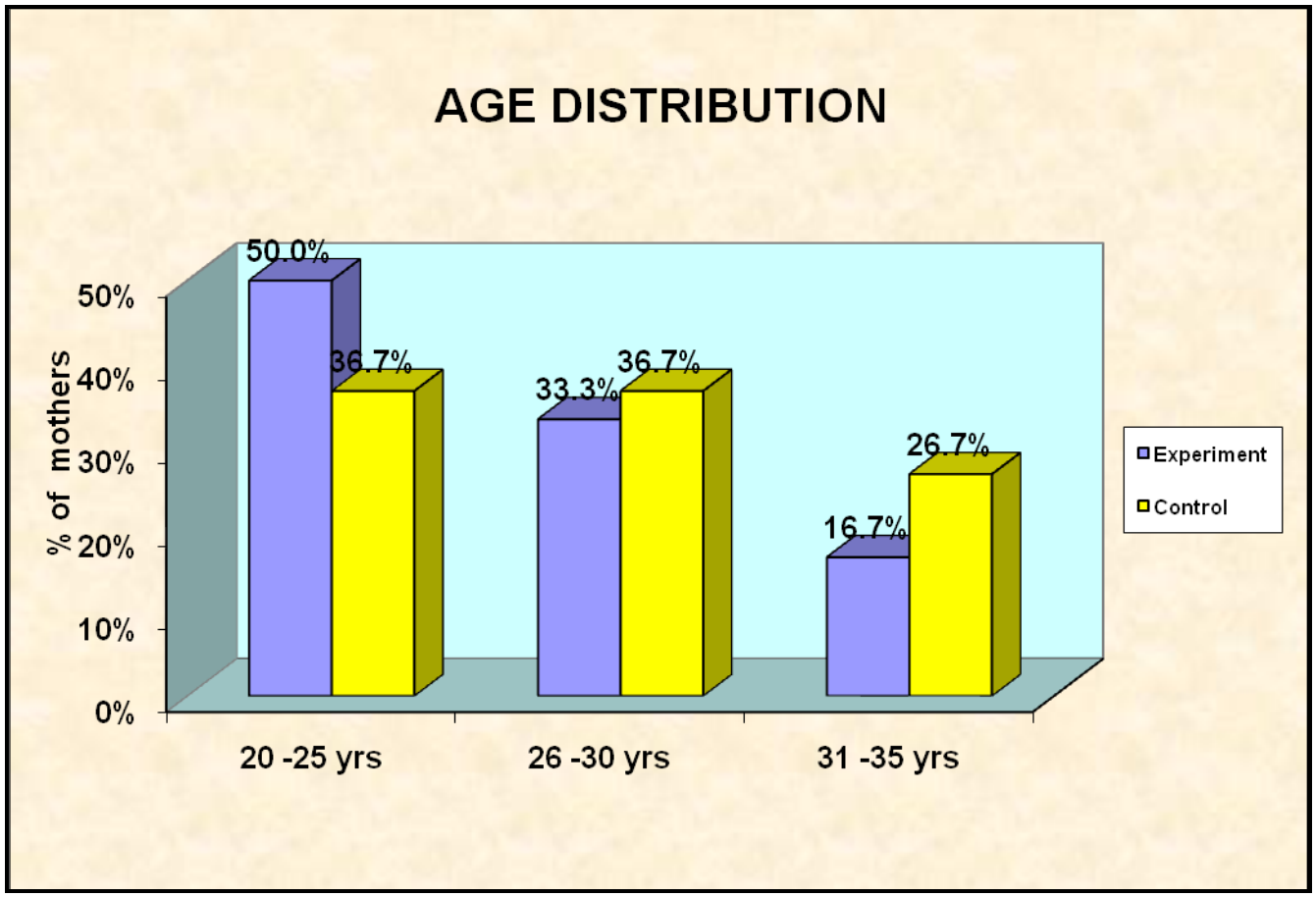


Figure- 3: shows that 50% mothers belonged to 20-25 years in Experimental group and 36.7% mothers belonged to 20-25 years and 36.7% were between 26-30 years in control group.

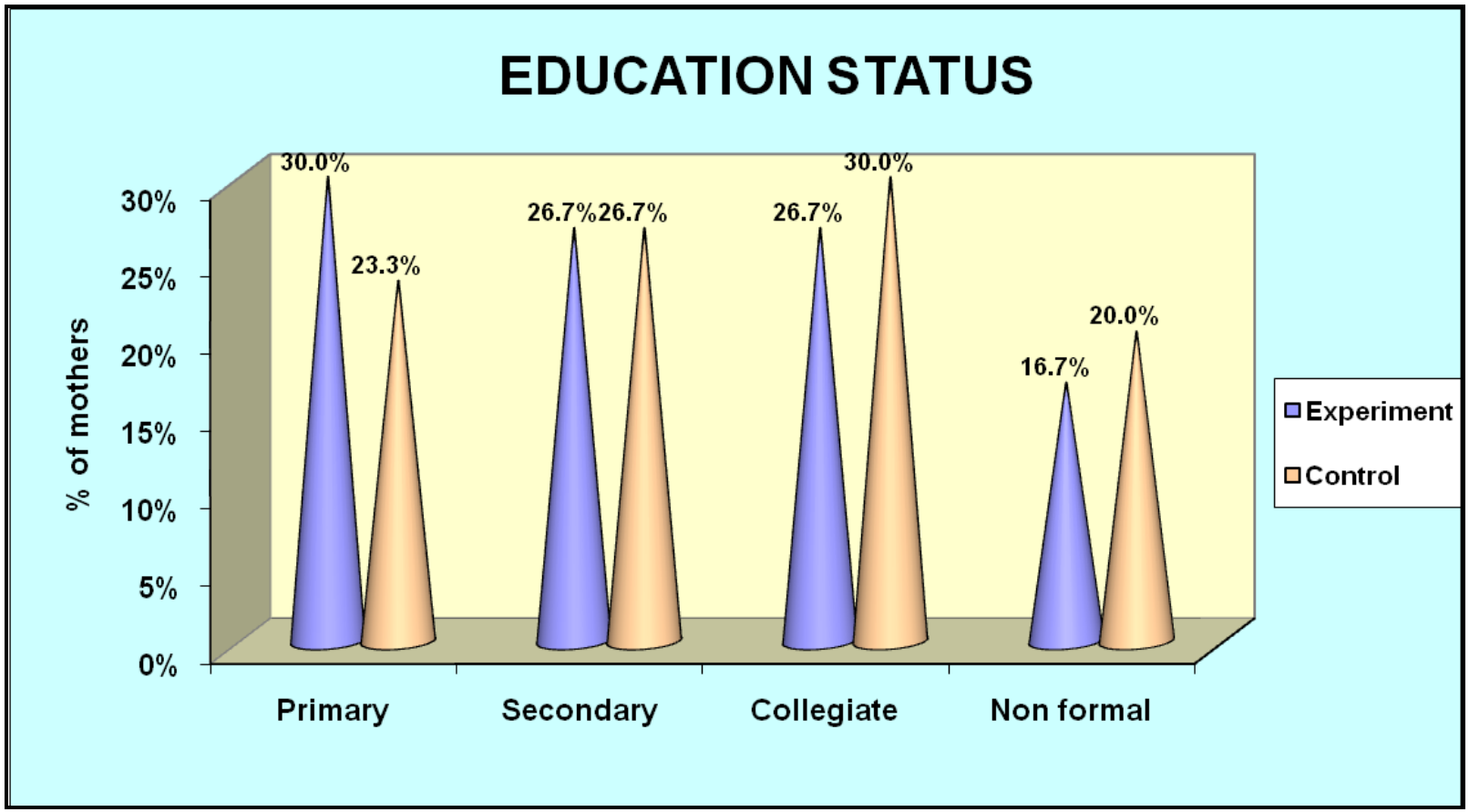


Figure-4: shows distribution of educational status in experimental group and control group.

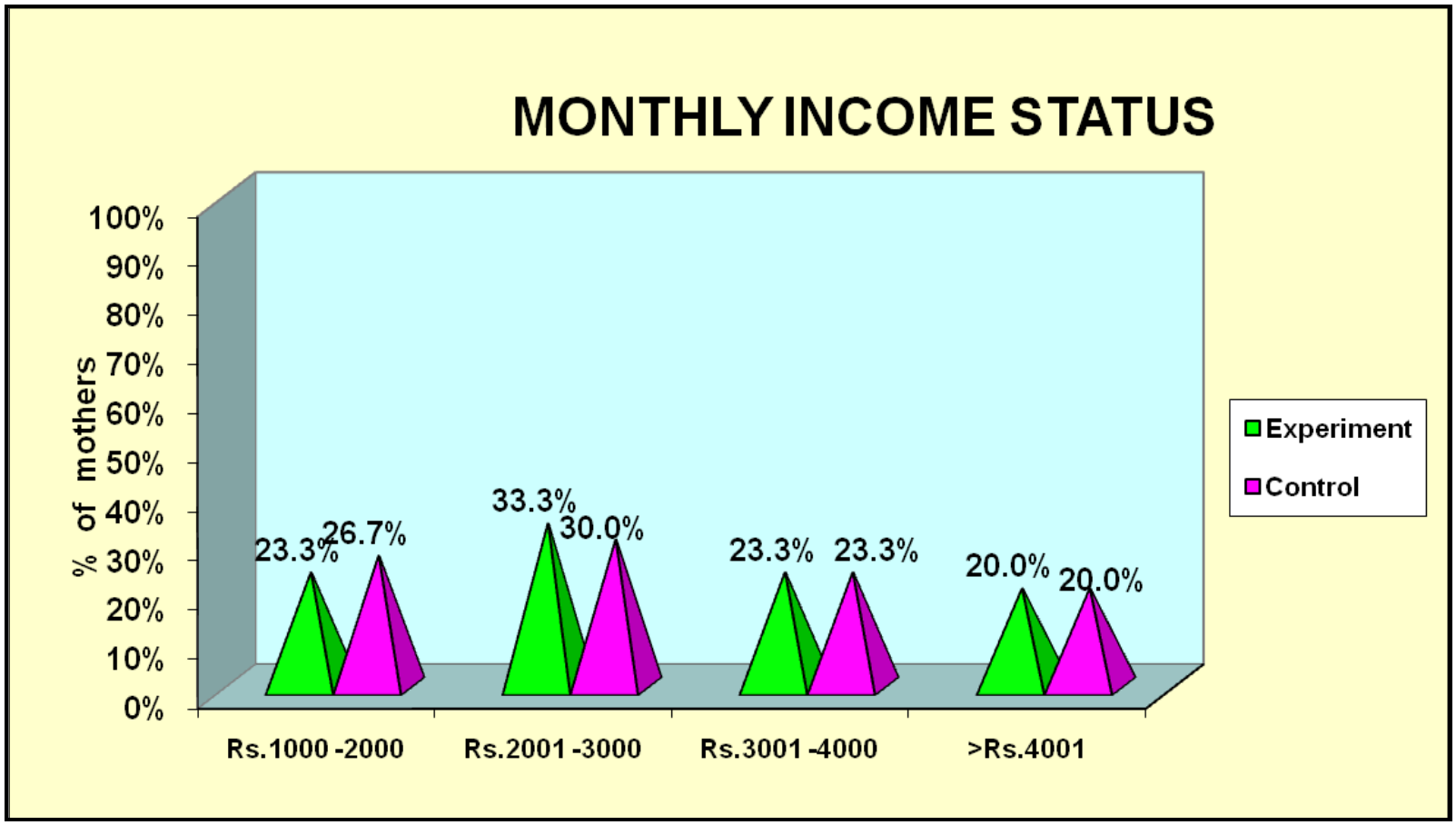


Figure 5: shows distribution of samples according to monthly income in Experimental group and control group.

SECTION -B

Table-2:shows distribution samples according to Obstetrical history

		Group			
		Experiment		Control	
		N	%	n	%
Gestational Age	37 -38 weeks	8	26.7%	9	30.0%
	38 -39 weeks	9	30.0%	9	30.0%
	39 -40 weeks	6	20.0%	8	26.7%
	40 -41 weeks	7	23.3%	4	13.3%
Duration of Married life	0 - 5 years	9	30.0%	12	40.0%
	5 - 10 years	12	40.0%	15	50.0%
	> 10 years	9	30.0%	3	10.0%
Menstrual Cycle	Regular	17	56.7%	14	46.7%
	Irregular	13	43.3%	16	53.3%
ANC reg	12 weeks	10	33.3%	9	30.0%
	12 -14 weeks	10	33.3%	12	40.0%
	>14 weeks	10	33.3%	9	30.0%
No. of AN Visit	1 -5 visits	12	40.0%	9	30.0%
	6 -10 visits	8	26.7%	11	36.7%
	> 10 visits	10	33.3%	10	33.3%

Table 2 shows the demographic information of primi gravida mothers in experimental group and control group.

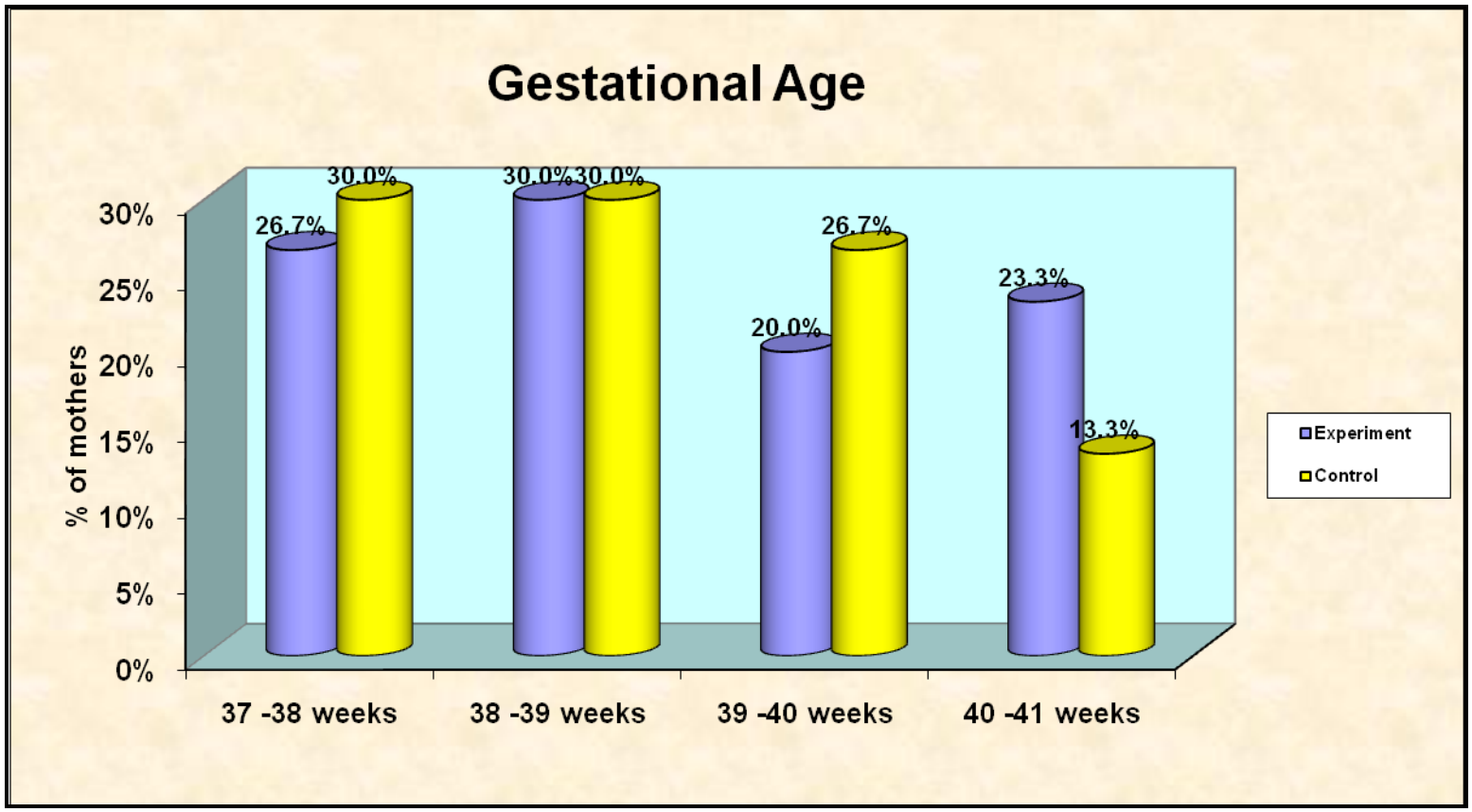


Figure 6: shows distribution of samples according to Gestational Age in experimental and control group

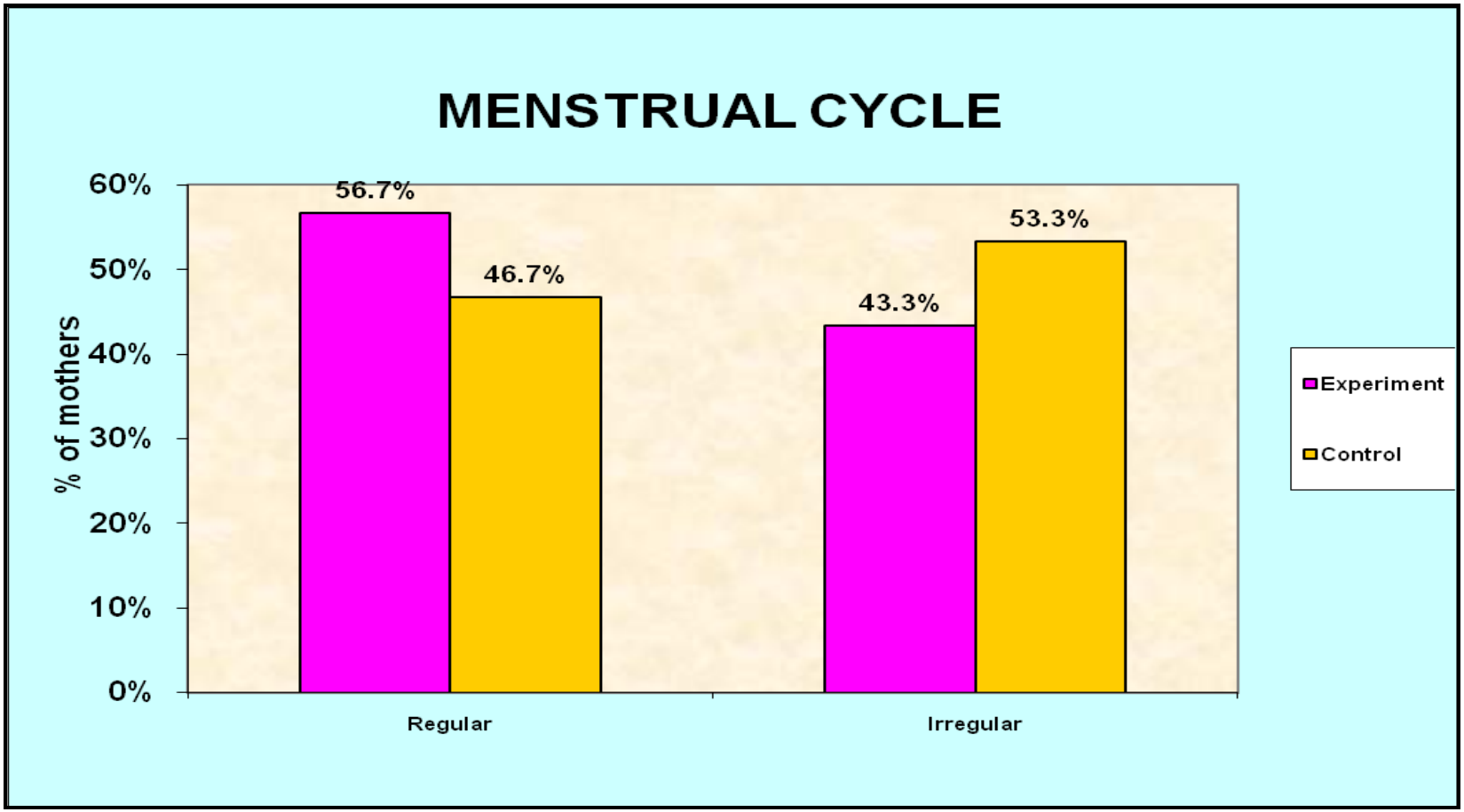


Figure 7: shows distribution of samples according to menstrual cycle in Experimental group and control group.

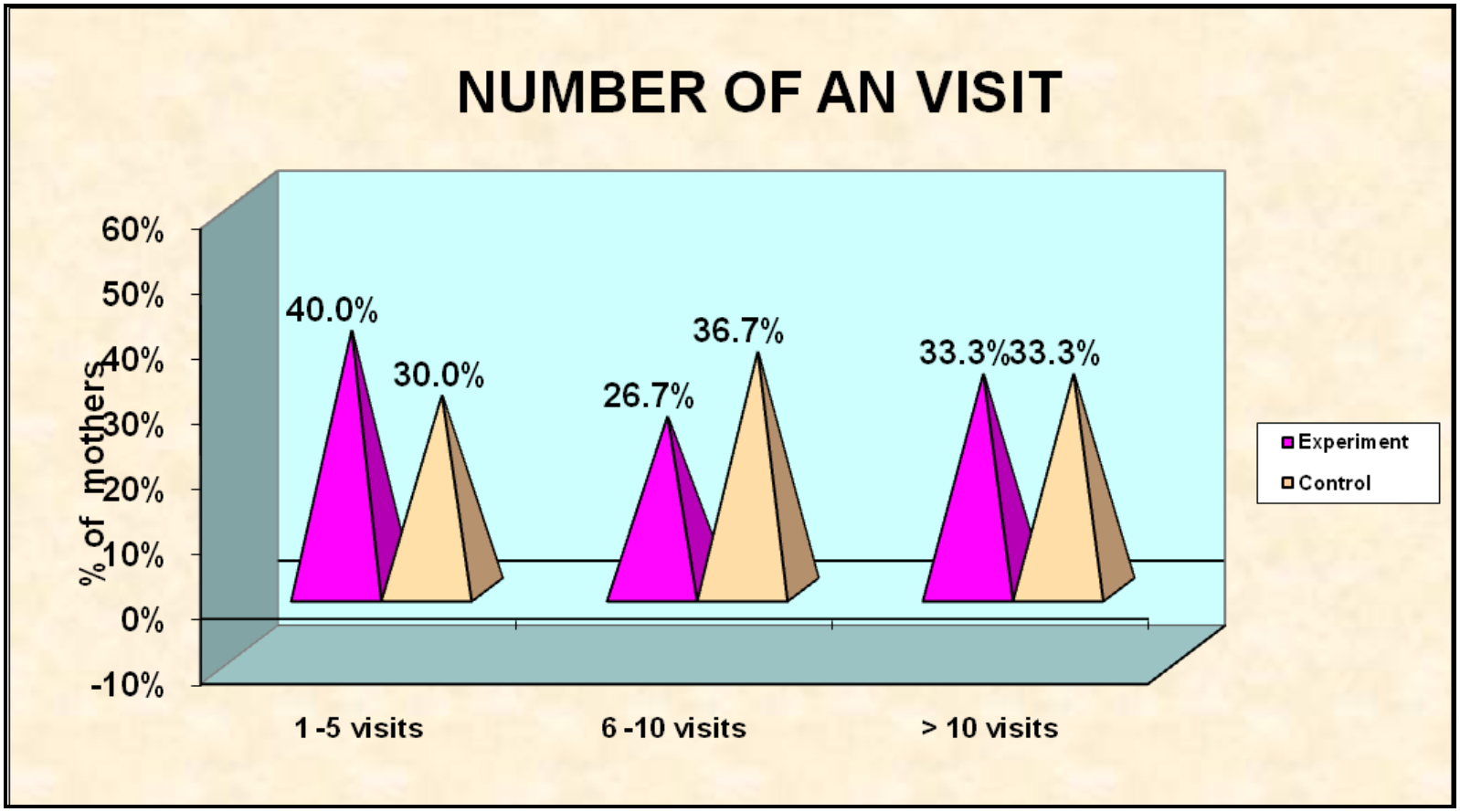


Figure 8: shows distribution of samples according to number of visits in Experimental group and control group.

SECTION -C

Table 3: Pretest Level of Anxiety

Anxiety	Experimental		Control		Chi square test
	n	%	N	%	
Mild	0	0.0%	0	0.0%	$\chi 2=0.10$ p=0.75
Moderate	23	76.7%	24	80.0%	
Severe	7	23.3%	6	20.0%	
Very severe	0	0.0%	0	0.0%	
Total	30	100.0%	30	100.0%	

* significant at P≤0.05 ** highly significant at P≤0.01 *** very high significant at P≤0.001

Table 2 assess pre-test level of anxiety among primigravida mothers in both experimental and Control group. There is no statistically significant difference between Experimental and Control group of mothers. Statistical significance was calculated using chi square.

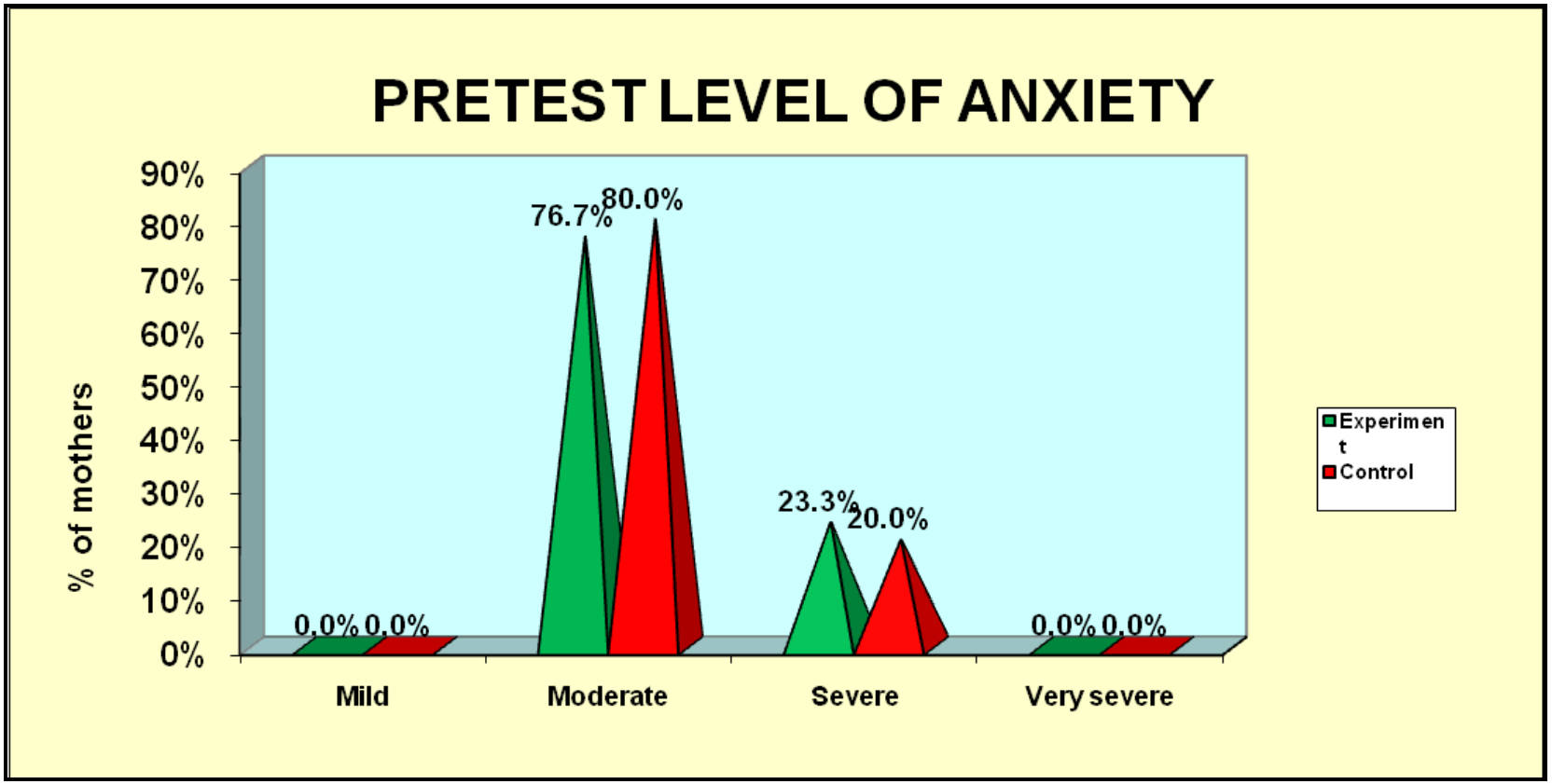


Figure 9: shows pretest level of anxiety in Experimental group and control group.

Table-4: Pretest Level of Pain Score

Description	Experimental		Control		Chi square test
	n	%	n	%	
Mild pain	0	0.0%	0	0.0%	$\chi 2=0.27$ p=0.60
Moderate pain	11	36.7%	12	40.0%	
Severe pain	19	63.3%	18	60.0%	
Total	30	100.0%	30	100.0%	

* significant at P≤0.05 ** highly significant at P≤0.01 *** very high significant at P≤0.001

Table 4 assess the pre-test level of pain among primigravida mothers in both experimental and Control group. There is no statistically significant difference between experiment and control group of mothers. Statistical significance was calculated using chi square

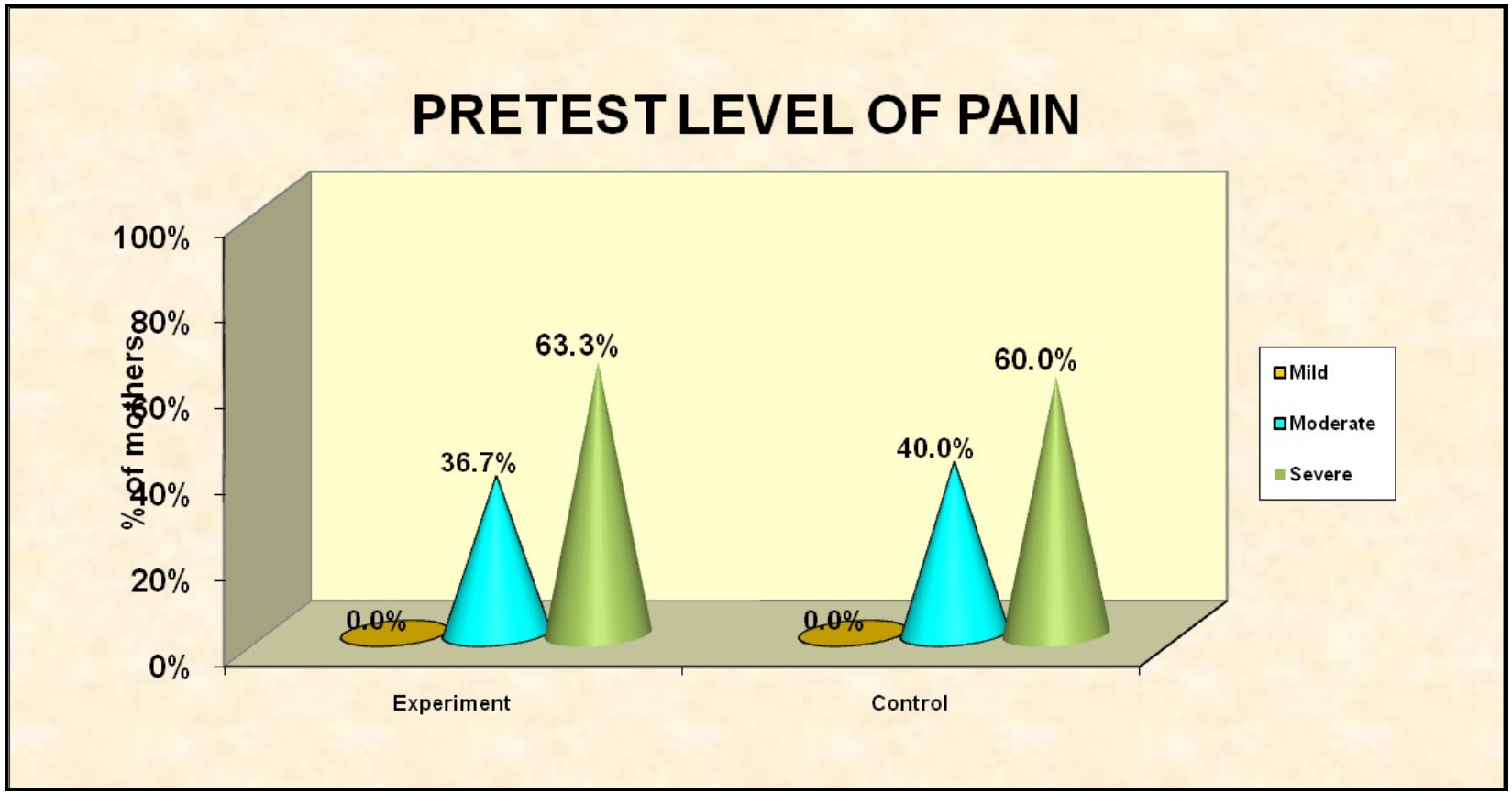


Figure 10: shows pretest level of pain in Experimental group and control group.

SECTION -D

Table 5: Posttest Level of Anxiety

Anxiety	Experimental		Control		Chi square test
	n	%	n	%	
Mild	6	20.0%	0	0.0%	$\chi 2=9.18$ p=0.01**
Moderate	24	80.0%	27	90.0%	
Severe	0	0.0%	3	10.0%	
Very severe	0	0.0%	0	0.0%	
Total	30	100.0%	30	100.0%	

* significant at P≤0.05 ** highly significant at P≤0.01 *** very high significant at P≤0.001

Table5: shows post-test level of anxiety among primigravida mothers in both experimental and Control group. There is a statistically significant difference between experiment and control group of mothers. Statistical significance was calculated using chi square.

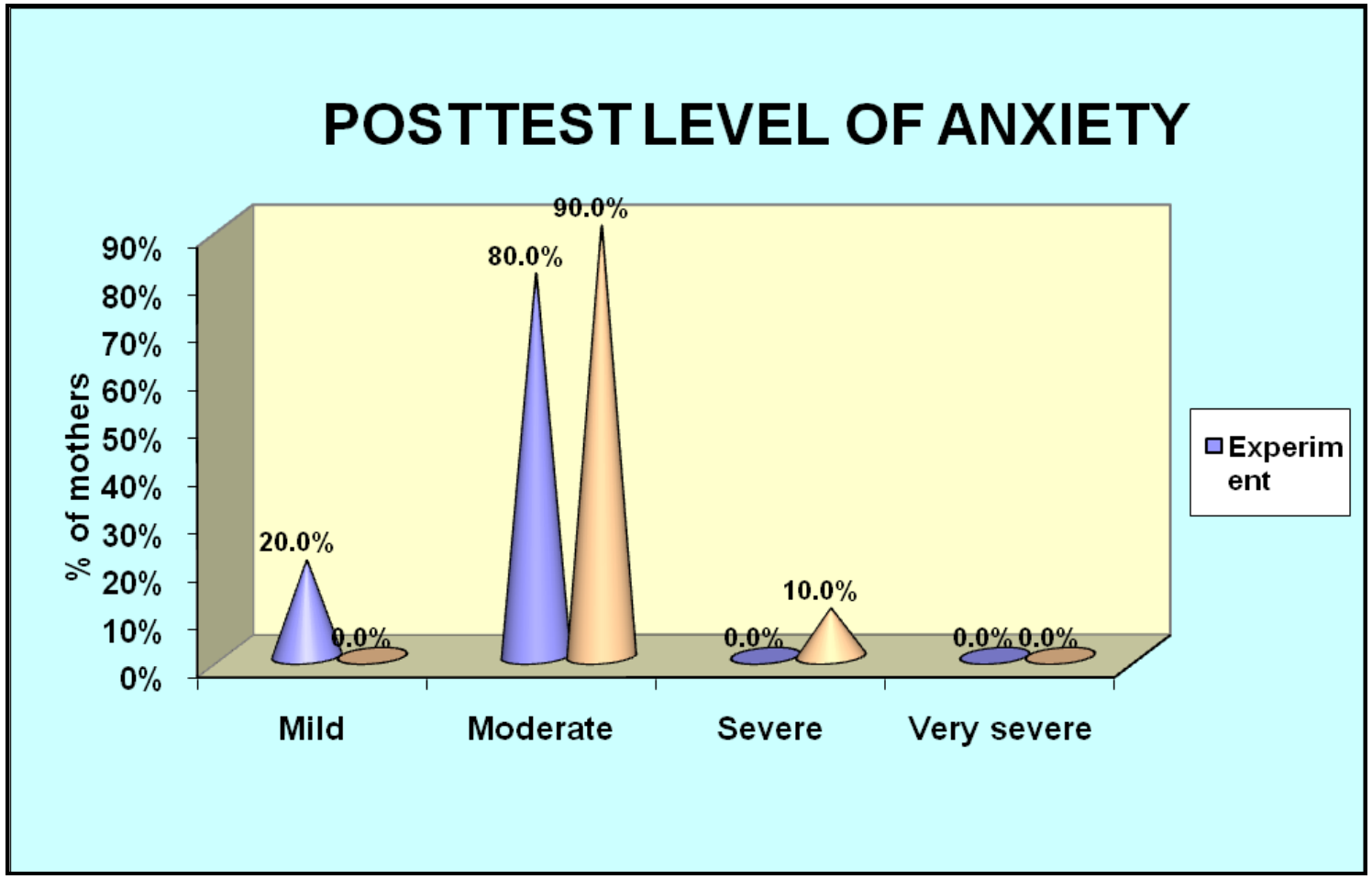


Figure 11: shows post test level of anxiety in Experimental group and control group.

Table 6: Posttest Level of Pain Score

pain	Experimental		Control		Chi square test
	n	%	n	%	
Mild pain	15	50.0%	4	13.3%	$\chi 2=9.32$ p=0.01**
Moderate pain	15	50.0%	26	86.7%	
Severe pain	0	0.0%	0	0.0%	
Total	30	100.0%	30	100.0%	

* significant at P≤0.05 ** highly significant at P≤0.01 *** very high significant at P≤0.001

Table 6 shows the post-test level of pain among primigravida mothers in both experimental and Control group. There is a statistically significant difference between experiment and control group of mothers. Statistical significance was calculated using chi square

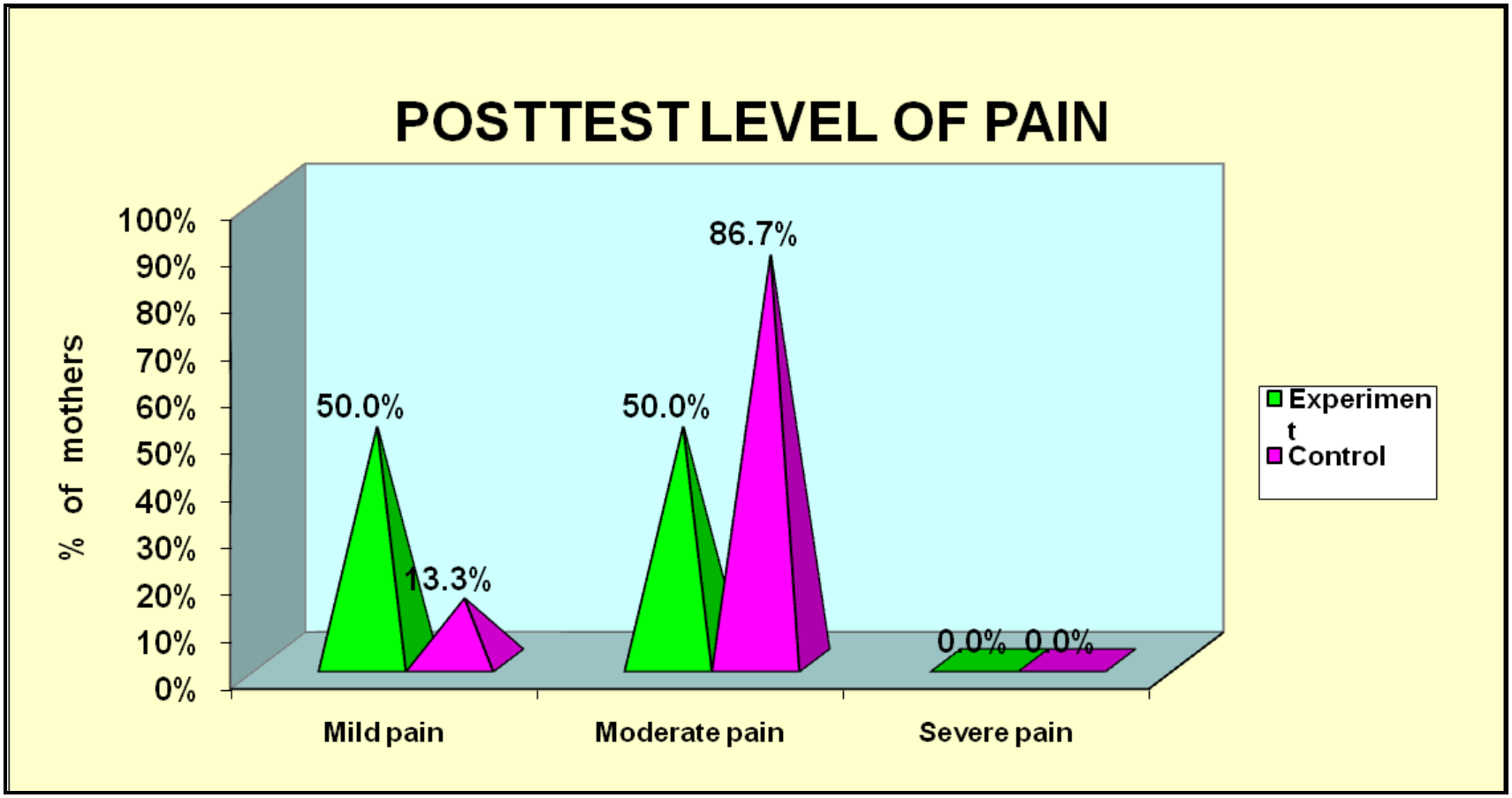


Figure 12: shows post test level of pain in Experimental group and control group.

Table 7: Pretest And Posttest Level of Anxiety

	Level of anxiety	Pretest		Posttest		Chi square test
		n	%	n	%	
Experiment	Mild	0	0.0%	6	20.0%	$\chi 2=13.02$ p=0.001*** significant
	Moderate	23	76.7%	24	80.0%	
	Severe	7	23.3%	0	0.0%	
	Very severe	0	0.0%	0	0.0%	
	Total	30	100.0%	30	100.0%	
Control	Mild	0	0.0%	0	0.0%	$\chi 2=1.18$ p=0.27 Not significant
	Moderate	24	80.0%	27	90.0%	
	Severe	6	20.0%	3	10.0%	
	Very severe	0	0.0%	0	0.0%	
	Total	30	100.0%	30	100.0%	

Table 7: Compares the pretest, and posttest level of anxiety among primigravida mothers. In experiment group there is a significant decrease in anxiety and reduction level is statistically significant. In control group there is a not significant decrease in reduction level is not statistically significant Statistical significance was calculated using chi square test.

SECTION -E

Table 8: Comparison of Anxiety Score

	No. of mothers	Pretest		Posttest		Paired t-test
		Mean	SD	Mean	SD	
Experiment	30	34.27	2.53	22.03	2.55	F=16.21 P=0.001***
Control	30	34.03	2.04	30.40	3.11	F=4.11 P=0.001***

* significant at P≤0.05 ** highly significant at P≤0.01 *** very high significant at P≤0.001

Table 8 compares pretest and posttest level of anxiety among primigravida mothers both experimental and Control group. Experimental group mothers are having 34.27 anxiety score in pretest and they are having 22.03 anxiety score in posttest, so the difference is 12.23. This difference is large and it is statistically significant. It was calculated using paired t-test. Experimental group mothers are having 34.03 anxiety score in pretest and they are having 30.40 anxiety score in posttest, so the difference is 3.63. This difference is large and it is statistically significant. It was calculated using paired t-test.

Table 9: Pretest and Posttest Level of Pain

	Level of pain	Pretest		Posttest		Chi square test
		n	%	n	%	
Experiment	Mild	0	0.0%	15	50.0%	$\chi 2=34.62$ p=0.001*** significant
	Moderate	11	36.7%	15	50.0%	
	Severe	19	63.3%	0	0.0%	
	Total	30	100.0%	30	100.0%	
Control	Mild	0	0.0%	4	13.3%	$\chi 2=27.16$ p=0.001*** significant
	Moderate	12	40.0%	26	86.7%	
	Severe	18	60.0%	0	0.0%	
	Total	30	100.0%	30	100.0%	

Table 9: compares the pretest, and posttest level of pain among primigravida mothers. In experimental group there is a significant decrease in pain and reduction level is statistically significant. In control group there is a significant decrease in reduction level is statistically significant Statistical significance was calculated using chi square test.

Table 10: comparison of pain score

	No. of mothers	Pretest		Posttest		Paired t-test
		Mean	SD	Mean	SD	
Experiment	30	7.63	0.49	3.30	1.09	F=19.56 P=0.001***
Control	30	7.60	0.50	5.50	1.33	F=5.16 P=0.001***

* significant at P≤0.05 ** highly significant at P≤0.01 *** very high significant at P≤0.001

Table 10 compares pretest and posttest level of pain among primigravida mothers both experimental and control group. Experiment group mothers are having 7.63 pain score in pretest and they are having 3.30 pain score in posttest, so the difference is 4.33. This difference is large and it is statistically significant. It was calculated using paired t-test. Experimental group mothers are having 7.60 pain score in pretest and they are having 5.50 pain score in posttest, so the difference is 2.10. This difference is large and it is statistically significant. It was calculated using paired t-test.

SECTION -G

Table 11: Effectiveness of lower back massage, breathing exercises on anxiety

	Pretest	Posttest	Mean difference with 95% Confidence interval	Percentage difference from baseline with 95% Confidence interval
Experiment	34.27	22.03	12.23(10.69-13.79)	35.6% (31.2% - 38.8%)
Control	34.03	30.40	3.63(2.40-4.87)	10.7%(7.1%-14.3%)

Table no 12 shows the effectiveness of lower back massage, breathing exercises on reduction of anxiety among primigravida mothers during first stage of labour at Institute of Obstetrics & Gynaecology, On an average, experimental group mothers are reduced 35.6% anxiety score whereas control group reduced 10.7% pain score. This difference shows the effectiveness of lower back massage, breathing exercises on anxiety. Differences between pretest and posttest score was analysed using proportion with 95% CI and mean difference with 95% CI.

Table 12: Effectiveness of lower back massage, breathing exercises on pain reduction

	Max score	**Pretest**	**Posttest**	**Mean difference with 95% Confidence interval**	**Percentage difference with 95% Confidence interval**
Experiment	10	7.63	3.30	4.33 (3.88-4.79)	43.3% (38.8%-47.9%)
Control	10	7.60	5.50	2.10 (1.50-2.70)	21.0% (15.0%-27.0%)

Table no 12 shows the effectiveness of lower back massage, breathing exercises on reduction of anxiety and pain perception among primigravida mothers during first stage of labour at Institute of Obstetrics & Gynaecology, On an average, experimental group mothers are reduced 43% pain score whereas control group reduced 21% pain score. This difference shows the effectiveness of lower back massage, breathing exercises on pain Differences between pretest and posttest score was analysed using proportion with 95% CI and mean difference with 95% CI.

Table 13: Correlation between Anxiety score and Pain score

		Karl pearson correlation coefficient	**Interpretation**
Experiment	Pretest	r= 0.12 p=0.35	Poor correlation between Anxiety and pain score
	Posttest	r= -0.52 p=0.001***	Moderate negative correlation between Anxiety and pain score
Control	Pretest	r= 0.11 p=0.32	Poor correlation between Anxiety and pain score
	Posttest	r= 0.22 p=0.05*	Fair correlation between Anxiety and pain score

Table 13: shows correlation between anxiety score and pain score.

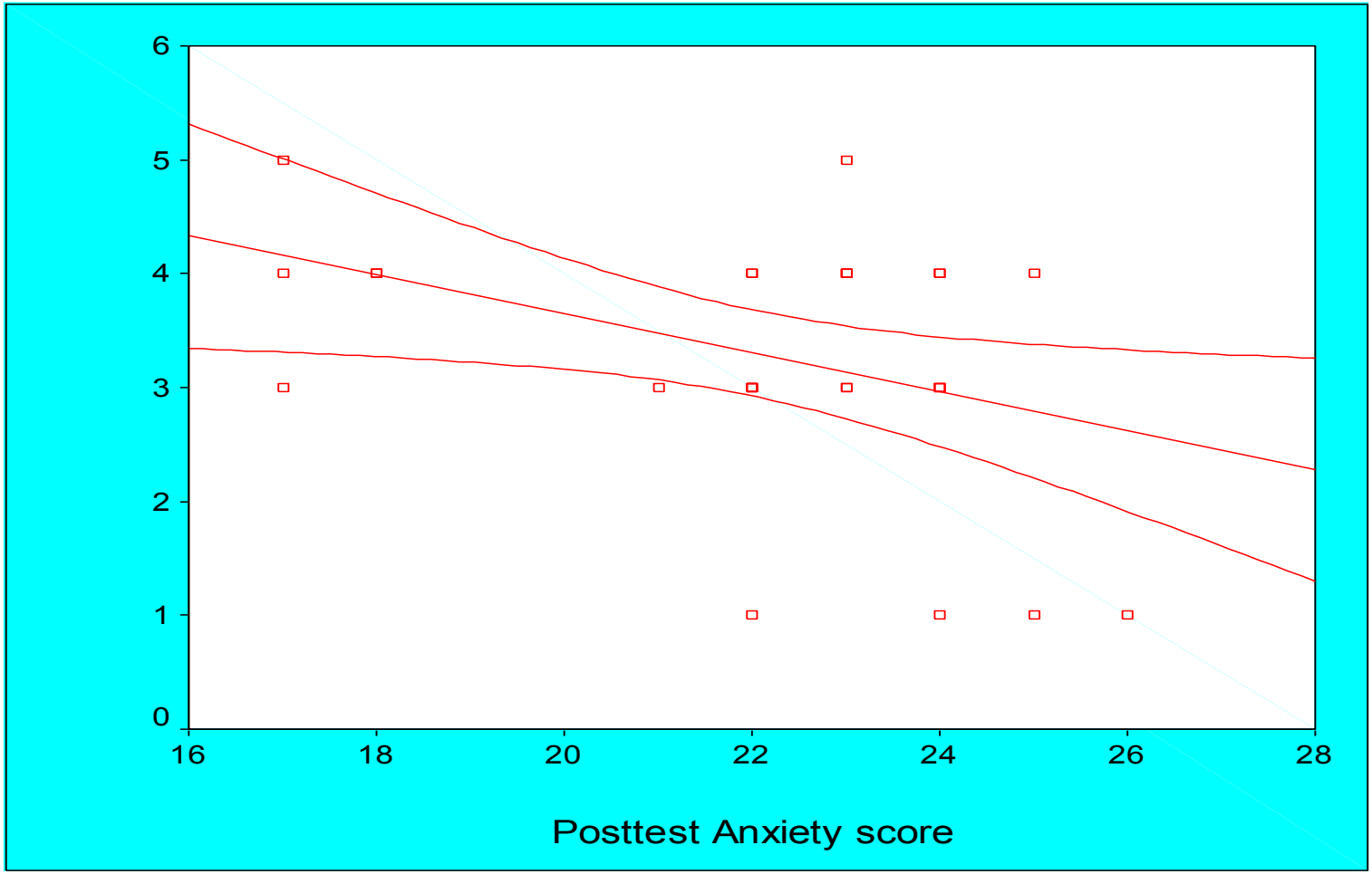


Fig 13: Scatter plot with regression estimate shows negative correlation between posttest anxiety score and posttest pain score

SECTION –H

Table 14: Association between level of Anxiety reduction score and demographic variables(Experimental Group)

Demographic variables		Level of anxiety reduction				Total	Chi square test
		Below average(<12.2)		Above average(>12.2)			
		n	%	n	%		
Age	20 -25 yrs	11	73.3%	4	26.7%	15	$\chi 2=6.67$ p=0.03*
	26 -30 yrs	3	30.0%	7	70.0%	10	
	31 -35 yrs	1	20.0%	4	80.0%	5	
Education	Primary	6	66.7%	3	33.3%	9	$\chi 2=3.80$ p=0.28
	Secondary	5	62.5%	3	37.5%	8	
	Collegiate	3	37.5%	5	62.5%	8	
	Non formal	1	20.0%	4	80.0%	5	
Occupation	Home maker	3	33.3%	6	66.7%	9	$\chi 2=3.74$ p=0.28
	Sedentary	4	57.1%	3	42.9%	7	
	Moderate	7	70.0%	3	30.0%	10	
	Heavy worker	1	25.0%	3	75.0%	4	
Religion	Hindu	6	60.0%	4	40.0%	10	$\chi 2=3.30$ p=0.34
	Muslim	6	60.0%	4	40.0%	10	
	Christian	3	37.5%	5	62.5%	8	
	Others			2	100.0%	2	
Income	Rs.1000 -2000	4	57.1%	3	42.9%	7	$\chi 2=0.28$ p=0.96
	Rs.2001 -3000	5	50.0%	5	50.0%	10	
	Rs.3001 -4000	3	42.9%	4	57.1%	7	
	>Rs.4001	3	50.0%	3	50.0%	6	
Type of Marrige	Consanguineous marriage	8	50.0%	8	50.0%	16	$\chi 2=0.00$ p=1.00
	Non Consanguineous marriage	7	50.0%	7	50.0%	14	
Type of Family	Nuclear family	8	61.5%	5	38.5%	13	$\chi 2=6.65$ p=0.01**
	Joint family	7	41.2%	10	58.8%	17	

Demographic variables		Level of anxiety reduction				Total	Chi square test
		Below average(<12.2)		Above average(>12.2)			
		n	%	n	%		
Supportive Person	Husband	4	50.0%	4	50.0%	8	$\chi 2=0.18$ p=0.91
	Parents	5	45.5%	6	54.5%	11	
	Neighbours	6	54.5%	5	45.5%	11	
Pregnancy Pattern locality	Planned	6	50.0%	6	50.0%	12	$\chi 2=0.00$ p=1.00
	Unplanned	9	50.0%	9	50.0%	18	
locality	Urban	8	53.3%	7	46.7%	15	$\chi 2=0.13$ p=0.71
	Rural	7	46.7%	8	53.3%	15	

* significant at P≤0.05 ** highly significant at P≤0.01 *** very high significant at P≤0.001

Table no 14 shows the association between level of anxiety reduction and demographic variables. Elder and joint family mothers are benefitted more. Statistical significance was calculated using chi square test.

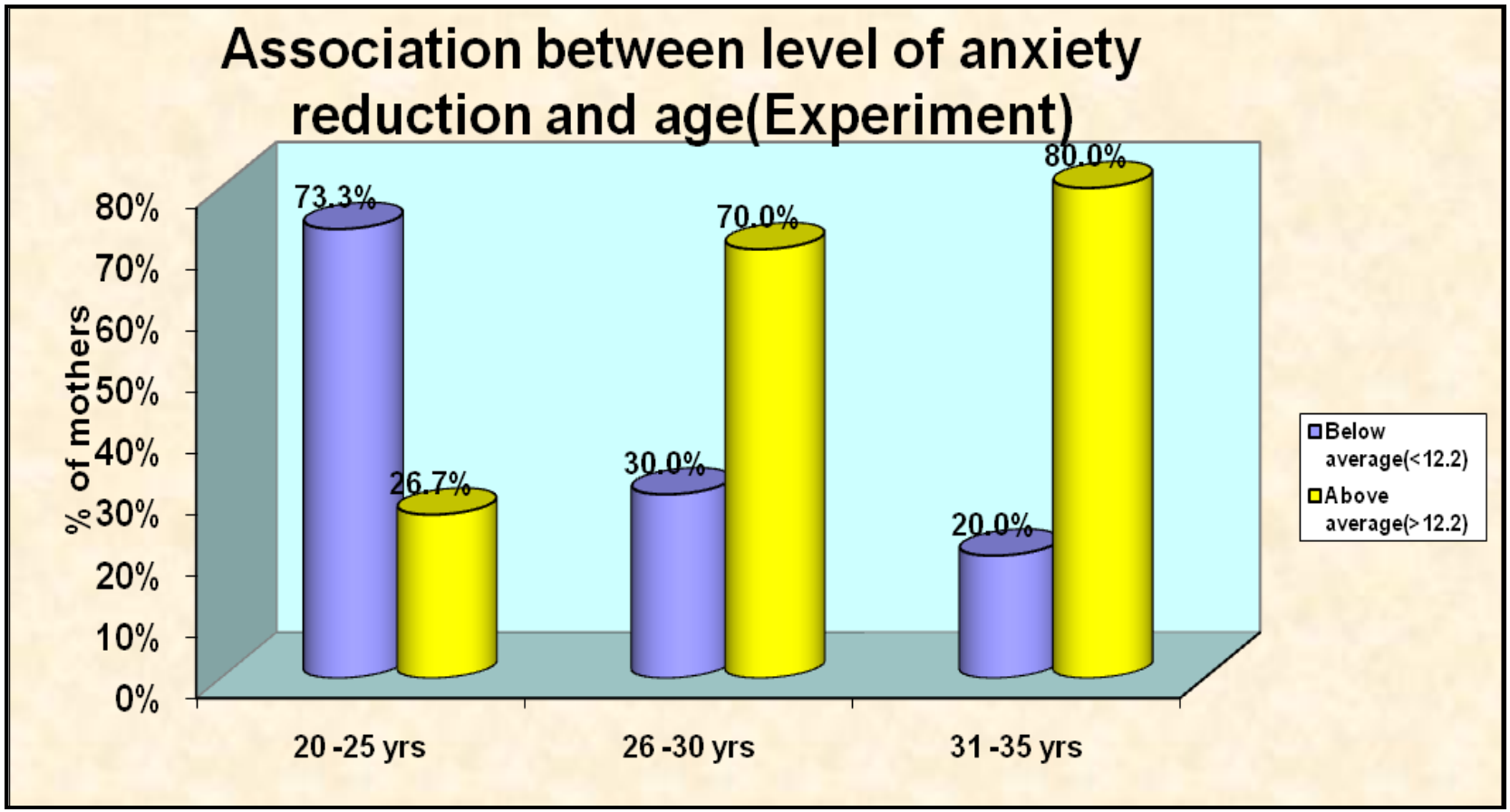


Figure 14: shows association between l level of anxiety reduction and age in Experimental group.

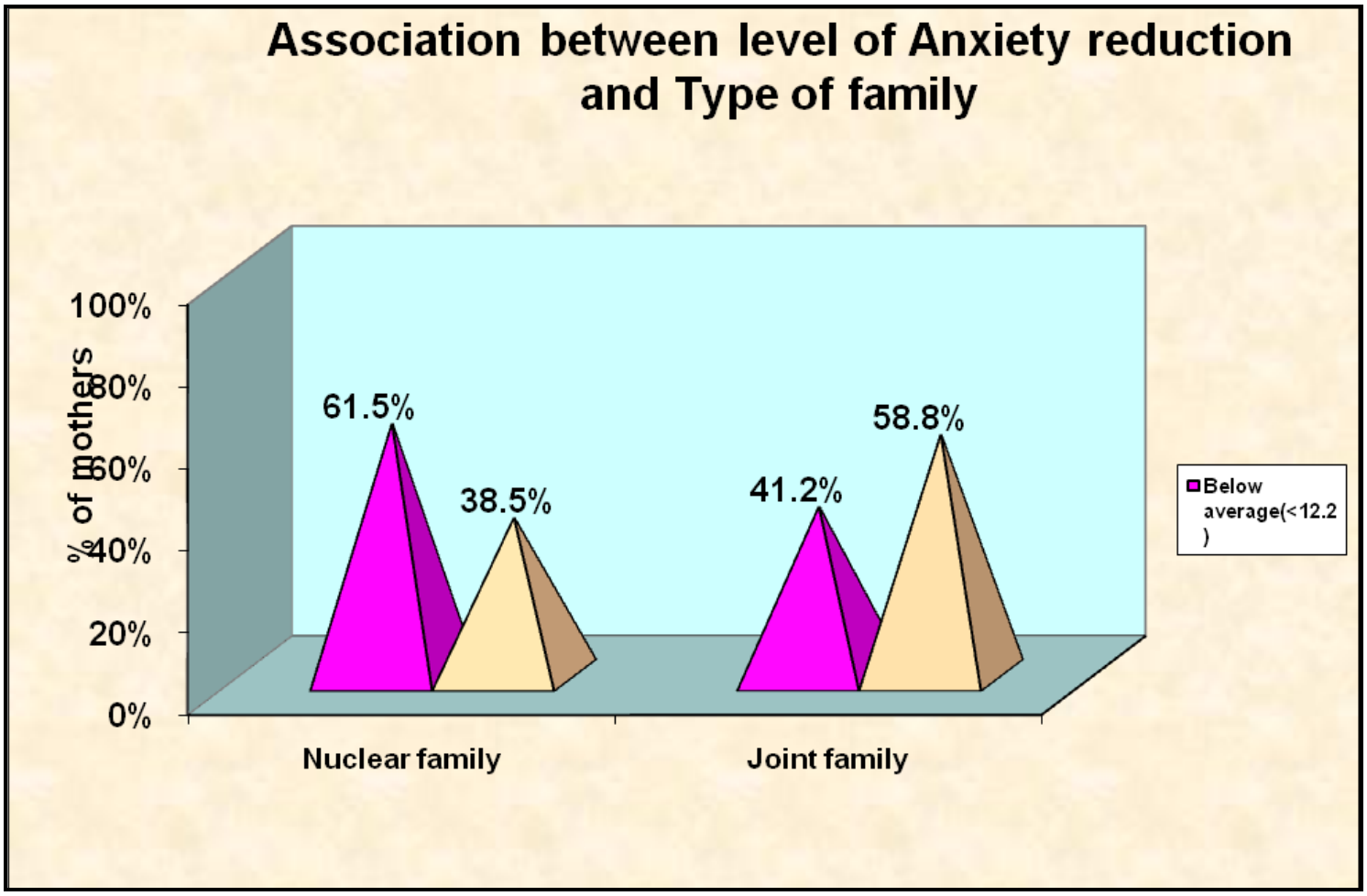


Figure 15: shows post test level of anxiety reduction and type of family in Experimental group.

Table 15: Association between level of Anxiety reduction score and Obstetrical variables (Experimental group)

		Level of anxiety reduction				Total	Chi square test
		Below average(<12.2)		Above average(>12.2)			
		n	%	n	%		
Gestational Age	37 -38 weeks	4	50.0%	4	50.0%	8	$\chi 2=0.25$ p=0.96
	38 -39 weeks	5	55.6%	4	44.4%	9	
	39 -40 weeks	3	50.0%	3	50.0%	6	
	40 -41 weeks	3	42.9%	4	57.1%	7	
Duration of Married life	0 - 5 years	5	55.6%	4	44.4%	9	$\chi 2=0.22$ p=0.89
	5 - 10 years	6	50.0%	6	50.0%	12	
	> 10 years	4	44.4%	5	55.6%	9	
Menstrual Cycle	Regular	5	29.4%	12	70.6%	17	$\chi 2=6.65$ p=0.01**
	Irregular	10	76.9%	3	23.1%	13	
ANC reg	12 weeks	6	60.0%	4	40.0%	10	$\chi 2=0.80$ p=0.67
	12 -14 weeks	5	50.0%	5	50.0%	10	
	>14 weeks	4	40.0%	6	60.0%	10	

		Level of anxiety reduction				Total	Chi square test
		Below average(<12.2)		Above average(>12.2)			
		n	%	n	%		
No. of AN Visit	1 -5 visits	9	75.0%	3	25.0%	12	$\chi 2$=9.90 p=0.01**
	6 -10 visits	3	37.5%	5	62.5%	8	
	> 10 visits	3	30.0%	7	70.0%	10	

* significant at P≤0.05 ** highly significant at P≤0.01 *** very high significant at P≤0.001

Table no 15 shows the association between level of anxiety reduction and demographic variables . regular menstrual and more AN visit mothers are benefitted more . Statistical significance was calculated using chi square test.

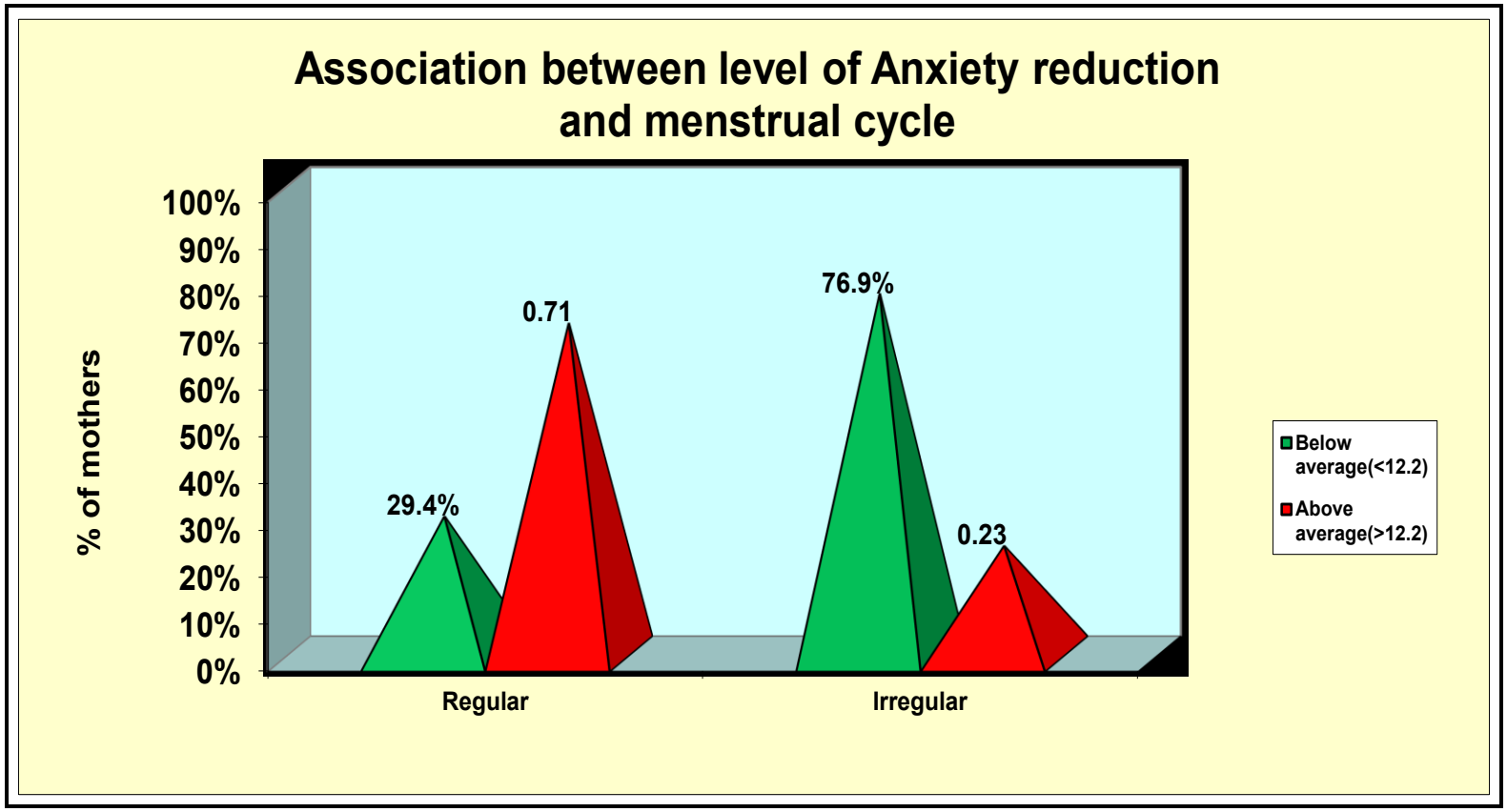


Figure 16: shows association between level of anxiety reduction and menstrual cycle in Experimental group.

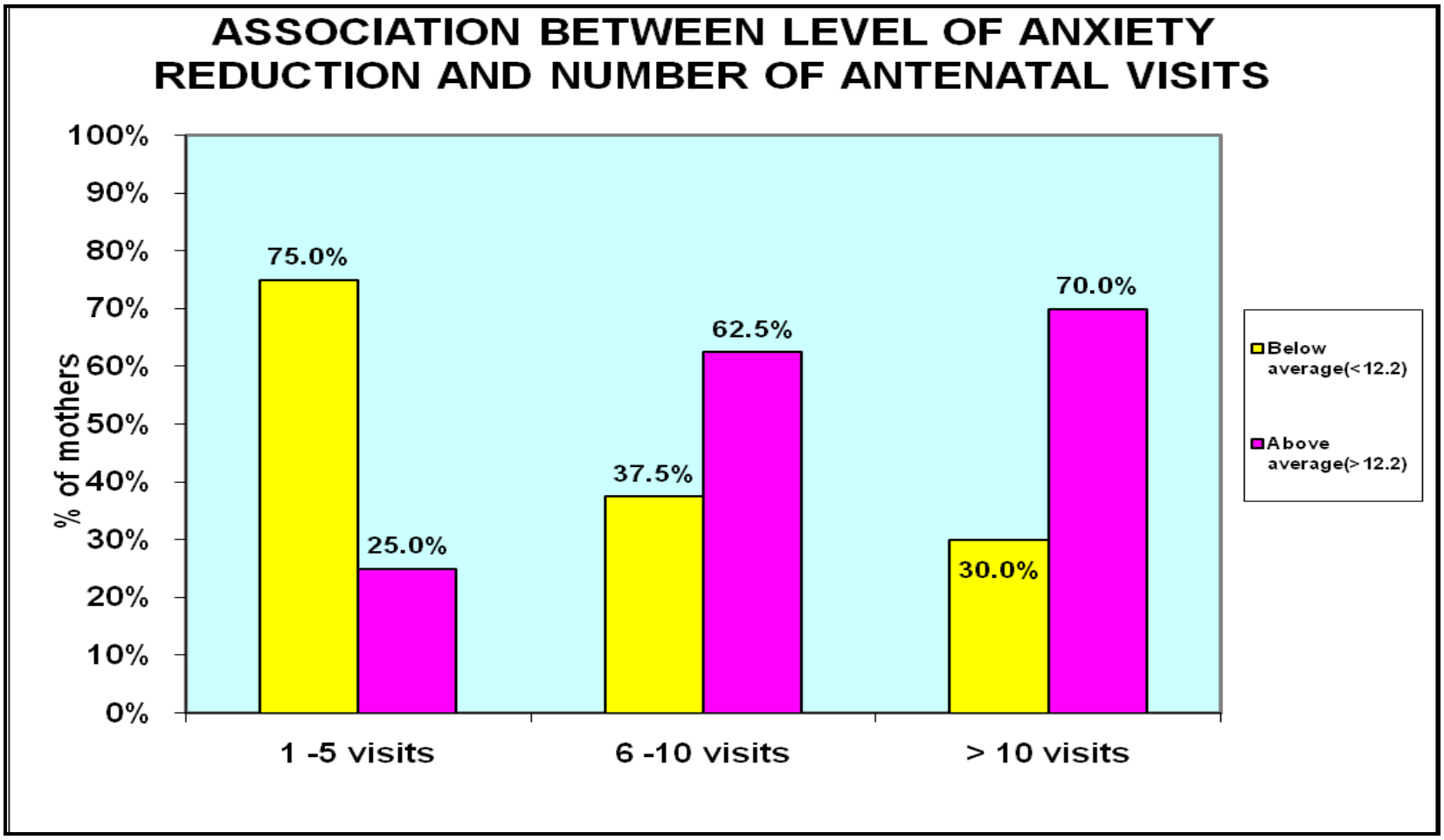


Figure 17: shows association between level of anxiety reduction and number of antenatal visits in Experimental group.

Table 16: Association between level of Anxiety reduction score and demographic variables(Control group)

Demographic variables		Level of anxiety reduction				Total	Chi square test
		Below average(<3.6)		Above average(>3.6)			
		n	%	n	%		
Age	20 -25 yrs	7	63.6%	4	36.4%	11	$\chi 2=1.40$ p=0.49
	26 -30 yrs	5	45.5%	6	54.5%	11	
	31 -35 yrs	3	37.5%	5	62.5%	8	
Education	Primary	3	42.9%	4	57.1%	7	$\chi 2=1.81$ p=0.63
	Secondary	4	50.0%	4	50.0%	8	
	Collegiate	6	66.7%	3	33.3%	9	
	Non formal	2	33.3%	4	66.7%	6	
Occupation	Home maker	2	33.3%	4	66.7%	6	$\chi 2=1.49$ p=0.68
	Sedentary	5	45.5%	6	54.5%	11	
	Moderate	6	60.0%	4	40.0%	10	
	Heavy worker	2	66.7%	1	33.3%	3	
Religion	Hindu	5	62.5%	3	37.5%	8	$\chi 2=1.34$ p=0.71
	Muslim	4	40.0%	6	60.0%	10	
	Christian	5	55.6%	4	44.4%	9	
	Others	1	33.3%	2	66.7%	3	
Income	Rs.1000 -2000	4	50.0%	4	50.0%	8	$\chi 2=0.25$ p=0.96
	Rs.2001 -3000	5	55.6%	4	44.4%	9	
	Rs.3001 -4000	3	42.9%	4	57.1%	7	
	>Rs.4001	3	50.0%	3	50.0%	6	
Type of Marrige	Consanguineous marriage	10	58.8%	7	41.2%	17	$\chi 2=0.00$ p=1.00
	Non Consanguineous marriage	5	38.5%	8	61.5%	13	
Type of Family	Nuclear family	7	50.0%	7	50.0%	14	$\chi 2=0.00$ p=1.00
	Joint family	8	50.0%	8	50.0%	16	

Demographic variables		Level of anxiety reduction				Total	Chi square test
		Below average(<3.6)		Above average(>3.6)			
		n	%	n	%		
Supportive Person	Husband	4	50.0%	4	50.0%	8	$\chi 2=0.73$ p=0.69
	Parents	7	58.3%	5	41.7%	12	
	Neighbours	4	40.0%	6	60.0%	10	
Pregnancy Pattern locality	Planned	6	46.2%	7	53.8%	13	$\chi 2=0.13$ p=0.71
	Unplanned	9	52.9%	8	47.1%	17	
locality	Urban	7	50.0%	7	50.0%	14	$\chi 2=0.00$ p=1.00
	Rural	8	50.0%	8	50.0%	16	

* significant at P≤0.05 ** highly significant at P≤0.01 *** very high significant at P≤0.001

Table no 16 shows the association between level of anxiety reduction and demographic variables . none of the demographic variables are associated . Statistical significance was calculated using chi square test.

Table 17: Association between level of Anxiety reduction score and Obstetrical variables (Control group)

		Level of anxiety reduction				Total	Chi square test
		Below average(<3.6)		Above average(>3.6)			
		n	%	n	%		
Gestational Age	37 -38 weeks	4	44.4%	5	55.6%	9	$\chi 2=1.22$ p=0.74
	38 -39 weeks	4	44.4%	5	55.6%	9	
	39 -40 weeks	4	50.0%	4	50.0%	8	
	40 -41 weeks	3	75.0%	1	25.0%	4	
Duration of Married life	0 - 5 years	6	50.0%	6	50.0%	12	$\chi 2=0.40$ p=0.81
	5 - 10 years	8	53.3%	7	46.7%	15	
	> 10 years	1	33.3%	2	66.7%	3	
Menstrual Cycle	Regular	7	50.0%	7	50.0%	14	$\chi 2=0.00$ p=1.00
	Irregular	8	50.0%	8	50.0%	16	
ANC reg	12 weeks	6	66.7%	3	33.3%	9	$\chi 2=1.44$ p=0.44
	12 -14 weeks	5	41.7%	7	58.3%	12	
	>14 weeks	4	44.4%	5	55.6%	9	
No. of AN Visit	1 -5 visits	6	66.7%	3	33.3%	9	$\chi 2=2.69$ p=0.26
	6 -10 visits	6	54.5%	5	45.5%	11	
	> 10 visits	3	30.0%	7	70.0%	10	

* significant at P≤0.05 ** highly significant at P≤0.01 *** very high significant at P≤0.001

Table no 17shows the association between level of anxiety reduction and demographic variables . none of the demographic variables are associated. Statistical significance was calculated using chi square test.

Table 18: Association between level of Pain reduction score and demographic variables (Experimental Group)

Demographic variables		Level of pain reduction				Total	Chi square test
		Below average(<4.3)		Above average(>4.3)			
		n	%	n	%		
Age	20 -25 yrs	10	66.7%	5	33.3%	15	$\chi 2=6.67$ p=0.03*
	26 -30 yrs	5	50.0%	5	50.0%	10	
	31 -35 yrs	0	0.0%	5	100.0%	5	
Education	Primary	7	77.7%	2	22.3%	9	$\chi 2=9.58$ p=0.02*
	Secondary	3	37.5%	5	62.5%	8	
	Collegiate	1	12.5%	7	87.5%	8	
	Non formal	4	80.0%	1	20.0%	5	
Occupation	Home maker	5	55.6%	4	44.4%	9	$\chi 2=2.39$ p=0.49
	Sedentary	2	28.6%	5	71.4%	7	
	Moderate	5	50.0%	5	50.0%	10	
	Heavy worker	3	75.0%	1	25.0%	4	
Religion	Hindu	4	40.0%	6	60.0%	10	$\chi 2=2.40$ p=0.49
	Muslim	5	50.0%	5	50.0%	10	
	Christian	4	50.0%	4	50.0%	8	
	Others	2	100.0%			2	
Income	Rs.1000 -2000	3	42.9%	4	57.1%	7	$\chi 2=0.95$ p=0.81
	Rs.2001 -3000	5	50.0%	5	50.0%	10	
	Rs.3001 -4000	3	42.9%	4	57.1%	7	
	>Rs.4001	4	66.7%	2	33.3%	6	
Type of Marrige	Consanguineous marriage	8	50.0%	8	50.0%	16	$\chi 2=0.00$ p=1.00
	Non Consanguineous marriage	7	50.0%	7	50.0%	14	

Demographic variables		Level of pain reduction				Total	Chi square test
		Below average(<4.3)		Above average(>4.3)			
		n	%	n	%		
Type of Family	Nuclear family	7	53.8%	6	46.2%	13	$\chi 2=0.13$ p=0.71
	Joint family	8	47.1%	9	52.9%	17	
Supportive Person	Husband	4	50.0%	4	50.0%	8	$\chi 2=0.18$ p=0.91
	Parents	5	45.5%	6	54.5%	11	
	Neighbours	6	54.5%	5	45.5%	11	
Pregnancy Pattern locality	Planned	7	58.3%	5	41.7%	12	$\chi 2=0.55$ p=0.45
	Unplanned	8	44.4%	10	55.6%	18	
Locality	Urban	7	46.7%	8	53.3%	15	$\chi 2=0.13$ p=0.71
	Rural	8	53.3%	7	46.7%	15	

* significant at P≤0.05 ** highly significant at P≤0.01 *** very high significant at P≤0.001

Table no 18 shows the association between level of pain reduction and demographic variables. Elder and more educated mothers are benefitted more. Statistical significance was calculated using chi square test.

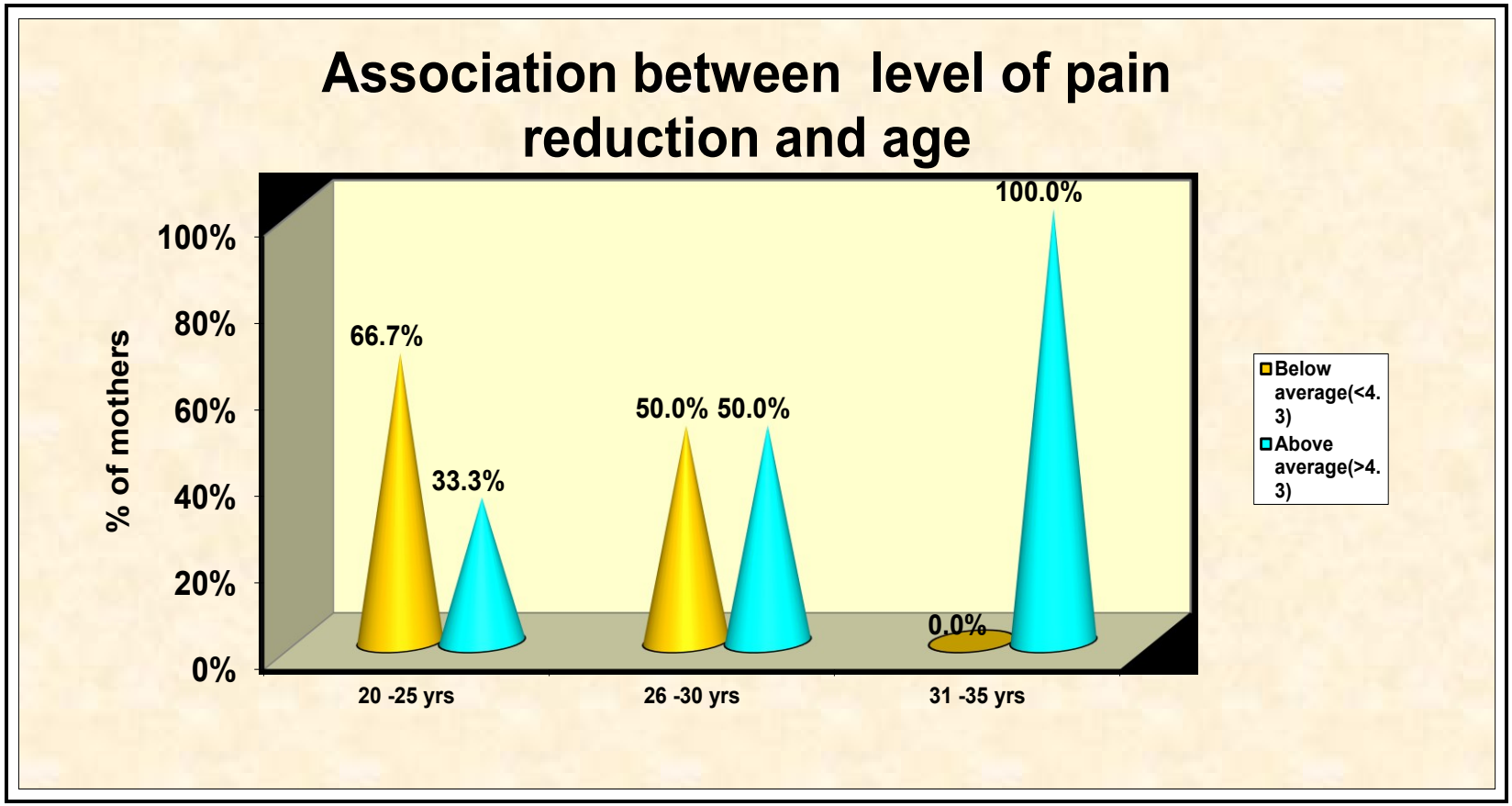


Figure 18: shows association between level of pain reduction and age in Experimental group.

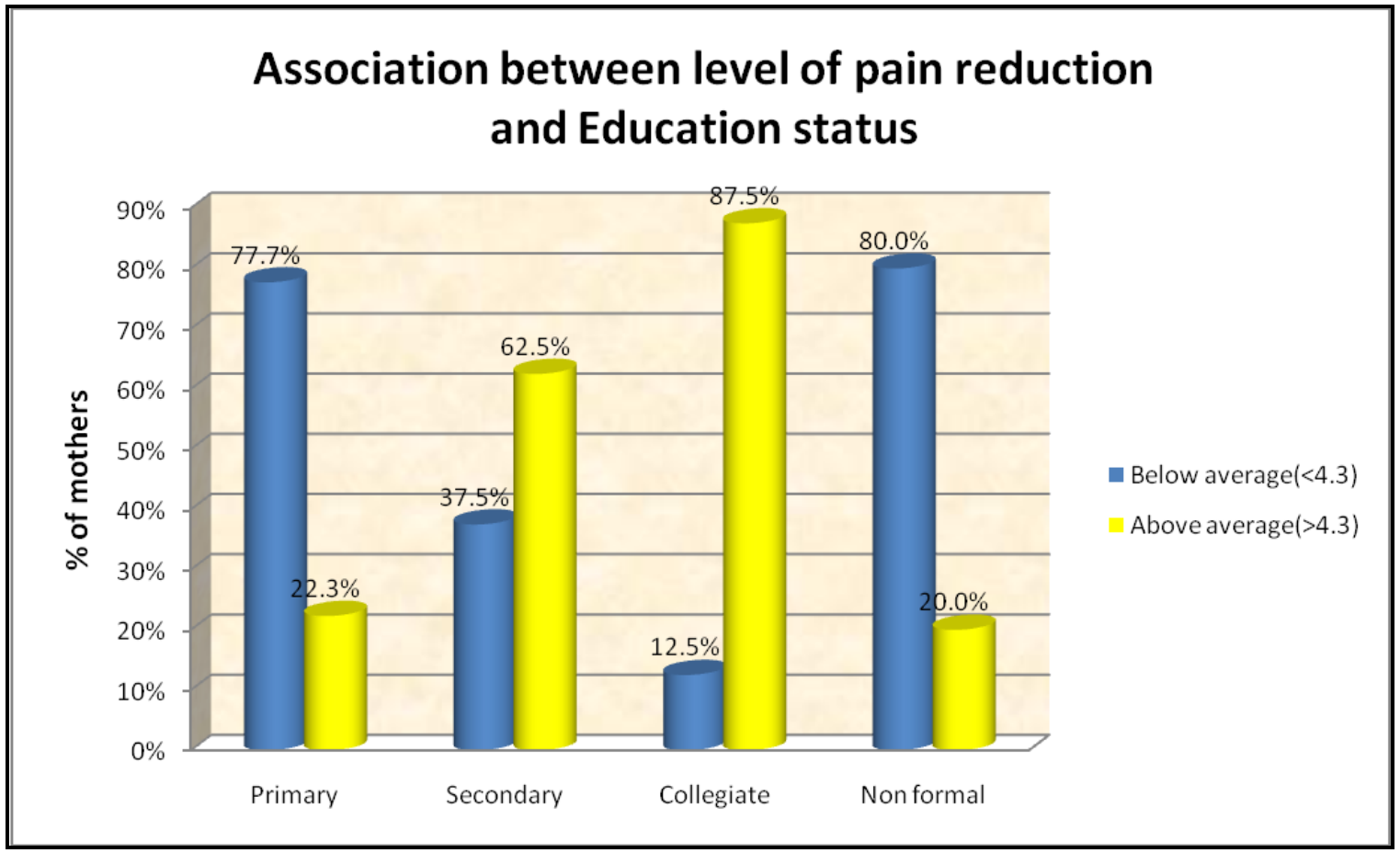


Figure 19: shows association between level of pain reduction and educational in Experimental group.

Table 19: Association between level of Pain reduction score and Obstetrical variables(Experimental Group)

		Level of pain reduction				Total	Chi square test
		Below average(<4.3)		Above average(>4.3)			
		n	%	n	%		
Gestational Age	37 -38 weeks	5	62.5%	3	37.5%	8	$\chi 2$=1.42 p=0.70
	38 -39 weeks	4	44.4%	5	55.6%	9	
	39 -40 weeks	2	33.3%	4	66.7%	6	
	40 -41 weeks	4	57.1%	3	42.9%	7	
Duration of Married life	0 - 5 years	4	44.4%	5	55.6%	9	$\chi 2$=0.22 p=0.89
	5 - 10 years	6	50.0%	6	50.0%	12	
	> 10 years	5	55.6%	4	44.4%	9	
Menstrual Cycle	Regular	4	23.5%	13	76.5%	17	$\chi 2$=11.00 p=0.001***
	Irregular	11	84.6%	2	15.4%	13	
ANC reg	12 weeks	5	50.0%	5	50.0%	10	$\chi 2$=0.00 p=1.00
	12 -14 weeks	5	50.0%	5	50.0%	10	
	>14 weeks	5	50.0%	5	50.0%	10	
No. of AN Visit	1 -5 visits	10	83.3%	2	16.7%	12	$\chi 2$=11.72 p=0.001***
	6 -10 visits	4	50.0%	4	50.0%	8	
	> 10 visits	1	10.0%	9	90.0%	10	

* significant at P≤0.05 ** highly significant at P≤0.01 *** very high significant at P≤0.001

Table no 19shows the association between level of pain reduction and demographic variables . regular menstrual and more AN visit mothers are benefitted more . Statistical significance was calculated using chi square test.

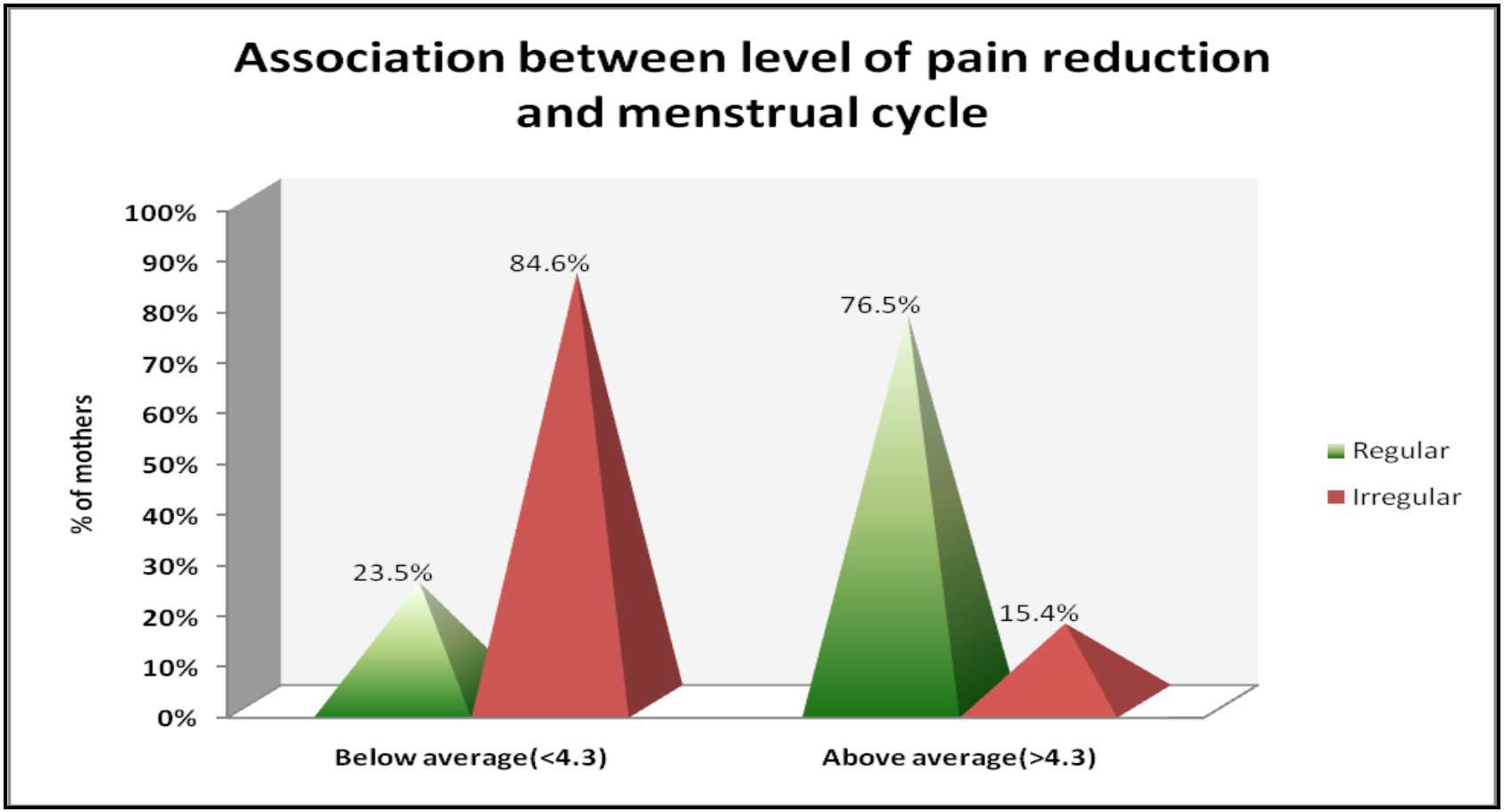


Figure 20: shows association between level of pain reduction and menstrual cycle in Experimental group.

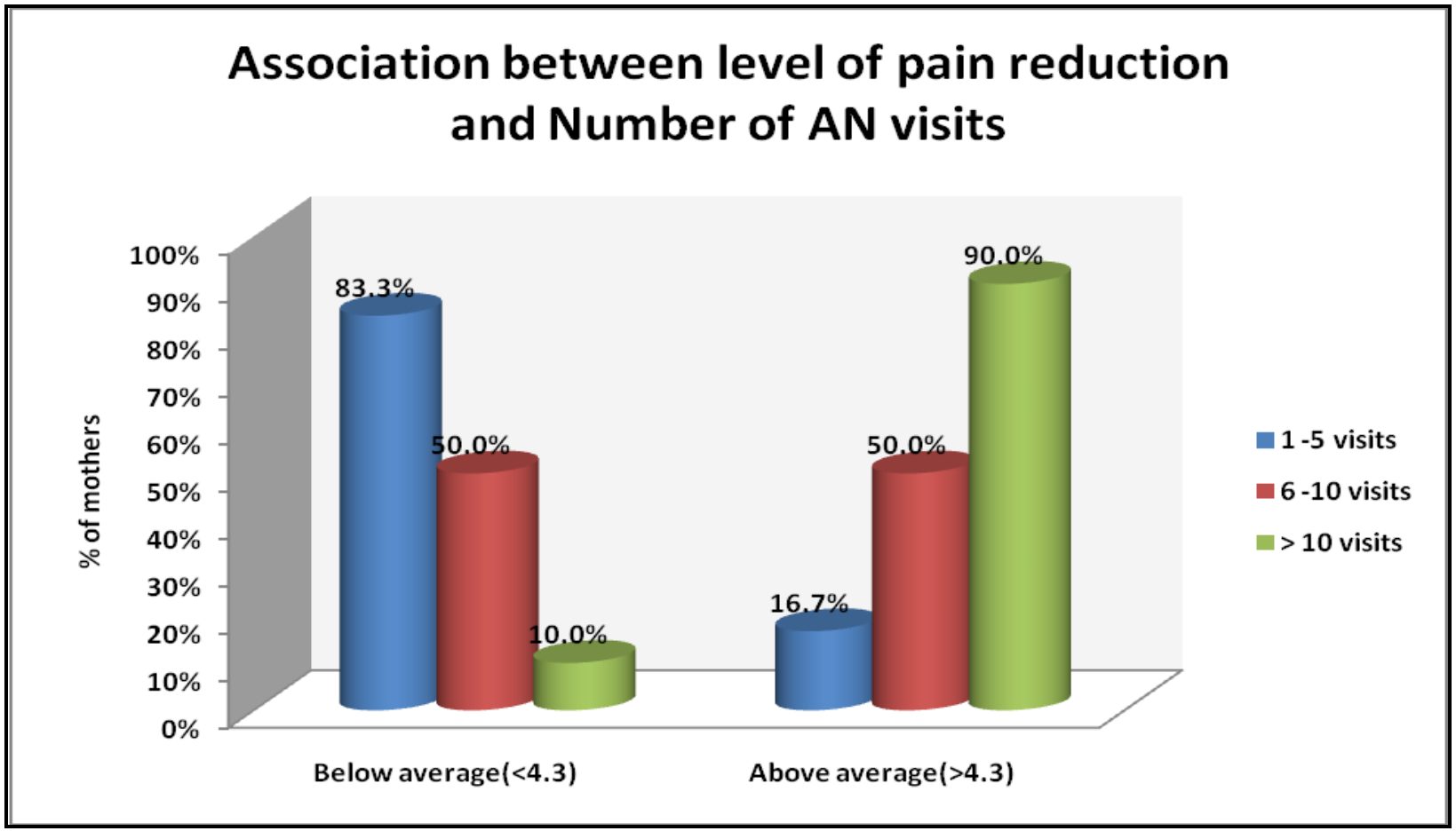


Figure 21: shows association between level of anxiety reduction and number of antenatal visits in Experimental group.

Table 20: Association between level of pain reduction score and demographic variables(Control Group)

Demographic variables		Level of pain reduction				Total	Chi square test
		Below average(<2.1)		Above average(>2.1)			
		n	%	n	%		
Age	20 -25 yrs	5	45.5%	6	54.5%	11	$\chi 2=2.05$ p=0.35
	26 -30 yrs	5	45.5%	6	54.5%	11	
	31 -35 yrs	6	75.0%	2	25.0%	8	
Education	Primary	4	57.1%	3	42.9%	7	$\chi 2=0.12$ p=0.98
	Secondary	4	50.0%	4	50.0%	8	
	Collegiate	5	55.6%	4	44.4%	9	
	Non formal	3	50.0%	3	50.0%	6	
Occupation	Home maker	4	66.7%	2	33.3%	6	$\chi 2=0.96$ p=0.81
	Sedentary	6	54.5%	5	45.5%	11	
	Moderate	5	50.0%	5	50.0%	10	
	Heavy worker	1	33.3%	2	66.7%	3	
Religion	Hindu	3	37.5%	5	62.5%	8	$\chi 2=2.42$ p=0.49
	Muslim	7	70.0%	3	30.0%	10	
	Christian	5	55.6%	4	44.4%	9	
	Others	1	33.3%	2	66.7%	3	
Income	Rs.1000 -2000	5	62.5%	3	37.5%	8	$\chi 2=0.62$ p=0.89
	Rs.2001 -3000	4	44.4%	5	55.6%	9	
	Rs.3001 -4000	4	57.1%	3	42.9%	7	
	>Rs.4001	3	50.0%	3	50.0%	6	
Type of Marrige	Consanguineous marriage	8	47.1%	9	52.9%	17	$\chi 2=0.62$ p=0.43
	Non Consanguineous marriage	8	61.5%	5	38.5%	13	

Demographic variables		Level of pain reduction				Total	Chi square test
		Below average(<2.1)		Above average(>2.1)			
		n	%	n	%		
Type of Family	Nuclear family	7	50.0%	7	50.0%	14	$\chi 2=0.11$ p=0.73
	Joint family	9	56.3%	7	43.8%	16	
Supportive Person	Husband	4	50.0%	4	50.0%	8	$\chi 2=0.26$ p=0.87
	Parents	6	50.0%	6	50.0%	12	
	Neighbours	6	60.0%	4	40.0%	10	
Pregnancy Pattern locality	Planned	7	53.8%	6	46.2%	13	$\chi 2=0.02$ p=0.96
	Unplanned	9	52.9%	8	47.1%	17	
Locality	Urban	8	57.1%	6	42.9%	14	$\chi 2=0.15$ p=0.69
	Rural	8	50.0%	8	50.0%	16	

* significant at P≤0.05 ** highly significant at P≤0.01 *** very high significant at P≤0.001

Table no 20 shows the association between level of pain reduction and demographic variables. None of the demographic variables are associated. Statistical significance was calculated using chi square test.

Table 21: Association between level of Anxiety reduction score and Obstetrical variables(Control Group)

		Level of anxiety reduction				Total	Chi square test
		Below average(<3.6)		Above average(>3.6)			
		n	%	N	%		
Gestational Age	37 -38 weeks	5	55.6%	4	44.4%	9	$\chi 2=1.48$ p=0.68
	38 -39 weeks	6	66.7%	3	33.3%	9	
	39 -40 weeks	3	37.5%	5	62.5%	8	
	40 -41 weeks	2	50.0%	2	50.0%	4	
Duration of Married life	0 - 5 years	6	50.0%	6	50.0%	12	$\chi 2=0.26$ p=0.87
	5 - 10 years	8	53.3%	7	46.7%	15	
	> 10 years	2	66.7%	1	33.3%	3	
Menstrual Cycle	Regular	7	50.0%	7	50.0%	14	$\chi 2=0.11$ p=0.73
	Irregular	9	56.3%	7	43.8%	16	
ANC reg	12 weeks	3	33.3%	6	66.7%	9	$\chi 2=2.31$ p=0.32
	12 -14 weeks	8	66.7%	4	33.3%	12	
	>14 weeks	5	55.6%	4	44.4%	9	
No. of AN Visit	1 -5 visits	6	66.7%	3	33.3%	9	$\chi 2=2.69$ p=0.26
	6 -10 visits	6	54.5%	5	45.5%	11	
	> 10 visits	3	30.0%	7	70.0%	10	

* significant at P≤0.05 ** highly significant at P≤0.01 *** very high significant at P≤0.001

Table no 21shows the association between level of anxiety reduction and demographic variables. None of the demographic variables are associated. Statistical significance was calculated using chi square test.

CHAPTER - V
DISCUSSION

"We can be anything we want to do if we stick to it long enough"

- Helen Keeller

This chapter deals with the discussion of the results of the data analyzed based on the hypotheses of the study. The purpose of the study is to assess "Effectiveness of lower back massage and breathing exercise on reduction of anxiety and pain perception among primigravida mothers during the first stage of labour. The finding of the study are discussed with reference to the objectives, hypothesis and with the findings of the study".

During labour, the woman experiences some degree of stress as her system responds to the physical changes that prepare her to give birth. Perception of pain is highly unique and differs from one individual to another though the intensity of pain stimuli is same. During the first stage of labour uterine contractions cause cervical dilatation, effacement and uterine ischemia resulting from contraction of the arteries to the myometrium. The discomfort from cervical changes and uterine ischemia is visceral pain.

Anxiety and fear are commonly associated with increased pain during labour. However excessive anxiety and fear cause more catecholamine secretions, which increases the stimuli to the brain from the pelvis because of decreased blood flow and increased muscle tension, which in turn magnifies the pain. Thus as fear and anxiety heighten, muscle tension increases the effectiveness of the uterine contraction decreases, the experience of discomfort increases and a cycle of increased fear and anxiety begins.

In the study two group quasi experimental designs was adopted for both experimental group and control group.

OBJECTIVES OF THE STUDY

- To assess the pre-test level of pain and anxiety among primigravida mothers in both experimental and Control group.
- To assess the post test level on pain and anxiety among primigravida mothers both experimental and control group.
- To compare the pre-test and post-test level of pain and anxiety among primigravida mothers in both experimental and control group.
- To associate the pre-test and post test level of reduction of pain and anxiety among primigravida mothers with select demographic

The first objective of the study is to assess the pre-test level of pain and anxiety among primigravida mothers in both experimental and Control group.

Padmavathi R. Dec 2007 A quasi-experimental design with the non-equivalent control group was used to assess the effectiveness of back massage on pain relief during first stage of labour among expectant mothers of Raichur. Convenient sampling technique was used for selection of 60 samples, 30 each in experimental and control group. Data was collected by structured interview schedule and visual analogue scale to assess the pain, Zung Self-Rating Anxiety Scale to assess anxiety and fatigue severity scale to assess the fatigue. The results showed that the pre-test mean score of pain in experimental group was almost same (4.53±0.82) as the control group (4.63±0.81) and obtained 't' value was 0.45, whereas in the post-test mean pain scores in experimental group(5.69±1.30) was lower compared to the control group(8.75±2.6) and 't' value was 4.25. So the study revealed that the continuous back

mass age hourly from the beginning till to the end of the first stage of labour have significantly helped in reducing the intensity of labour pain.

The present study revealed that the pre-test level of anxiety and pain perception among primigravida mothers both in experimental group and control group. Statistical significance was calculated by using chi squire test. In experimental group, 63.3% of the mothers are having severe pain, 60.0% are severe level of pain. In control group, 40.0% of the women are having moderate level of pain, 60% are having severe level of pain. This difference is large and it is statistically significant.

The second objective of the study was to assess the post test level on pain and anxiety among primigravida mothers both experimental and control group

Garshabi A, Faghihs Aug 2004 A prospective randomised study was conducted to investigate the effect of exercise during pregnancy on the intensity of low back pain. The sample comprised of 107 women participated in an exercise programme and 105 in control group. The result showed that low back pain intensity increased in the control group. The exercise group showed significant reduction in the intensity of low back pain after exercise ($p<0.0001$). So the study concluded that exercise during second half of the pregnancy significantly reduced the intensity of low back pain.

Homer C, Dahcente A randomised prospective study was conducted in Watford General Hospital to study the effects of antenatal perineal massage on subsequent perineal outcomes at delivery. The sample comprised of 861 nulliparous women with singleton pregnancy. The results showed that the group assigned to massage with the group assigned to no massage showed a reduction of 6.1% in second or third degree tears or episiotomies. This corresponded to tear rates of 75.1% in the no massage group and 69% in the massage group ($p=0.073$). There was a corresponding reduction in instrumental deliveries from 40.9% to

34.6% (p=0.094). The study concluded that the antenatal perineal massage appeared to have some benefit in reducing second and third degree perineal tear.

In the present study, post-test level of pain among primigravida mothers in both experimental and control group. In experimental group, 50% of the mothers are having mild level of pain, 50% are moderate level of pain. In control group, 86.7% of the women are having moderate level of pain, 13.3% are having mild pain.

In the present study, post-test level of anxiety among primigravida mothers in both experimental and control group. In experimental group, 20% of the mothers are having mild level of pain, 80% are moderate level of pain. In control group, 90.% of the women are having moderate level of pain, 0.0% are having no pain.

There is a statiscally significance between experimental and control group of mothers. Statistical significance was calculated using chi squire test.

The third objective of the study was to compare the pre-test and post-test level of pain and anxiety among primigravida mothers in both experimental and control group.

Nabb MT, Kimber L, Haines A Aug 2006 An experimental study was conducted in Taiwan to assess whether massage coupled with breathing exercises would have more positive effects than breathing exercises alone during labour. The study sample consisted of 28 women who were randomly assigned to the intervention group (massage therapy with breathing exercise-MT) and the control group (breathing exercise alone). The results of this study indicated that massage therapy reduced stress and pain during labour. The intervention group reported less depressed mood than the control (MT: decrease of 7.1, control: increase of 0.5; $p<0.05$) and had lower stress levels. In terms of labour pain, only

the massage therapy group experienced decrease in labour pain ($p<0.001$). Additionally, the massage therapy group was the only group to decrease the anxiety levels. Findings also showed that women in the intervention group were in labour for an average of 8.5 hours compared to average of 11.3 hours of the control group ($p<O.05$). So the study concluded that massage therapy when given with breathing exercises reduces the stress during labour and increases the quality of women's experience of childbirth.

The present study has found that compares pre-test and post-test level of anxiety among primigravida mothers both experimental and control group. Experimental group mothers are having 34.27 anxiety score in pre-test and they are having 22.03 anxiety score in post-test, so the difference is 12.23. This difference is large and it is statistically significant. It was calculated using paired t-test.

Experimental group mothers are having 34.03 anxiety score in pre-test and they are having 30.40 anxiety score in post-test, so the difference is 3.63. This difference is large and it is statistically significant. It was calculated using paired t-test.

Comparison pre-test and post-test level of pain among primigravida mothers both experimental and control group. Experimental group mothers are having 7.63 pain score in pre-test and they are having 3.30 pain score in post-test, so the difference is 4.33. This difference is large and it is statistically significant. It was calculated using paired t-test.

Experimental group mothers are having 7.60 pain score in pre-test and they are having 5.50 pain score in post-test, so the difference is 2.10. This difference is large and it is statistically significant. It was calculated using paired t-test.

The fourth objective of study was to associate the pre-test and post test level of reduction of pain and anxiety among primigravida mothers with select demographic

Saldanha H. 2004 A quasi-experimental study was conducted to determine the effectiveness of breathing exercises on duration, outcome of labour, and behavioural response of gravid women during the first stage of labour. The sample comprised of 20 subjects each in experimental and control group, selected by purposive sampling technique. Data was collected using a structured observation checklist. The results showed the mean percentage scores for the behavioural responses of women in the experimental group to be higher (94.04%) than that of the control group (62.55%). There was significant difference in behavioural responses of women in labour in both experimental and control group (t3=23.19, p=<0.05), and also a significant difference in the duration of the first stage of labour in prirnigravida mothers (t_{18}=2.40, p<0.05). The results revealed that breathing exercises during labour are effective in reducing the duration and outcome of labour.

Basil R. 2001 A study was conducted to evaluate the effectiveness of back massage and breathing exercises on pain relief in primigravida mothers during the first stage of labour in a selected hospital at Delhi. The sample comprised of 26 each in experimental and control group, who were selected by purposive sampling. A standardised pain assessment tool was used to collect the data. Data was analysed using descriptive and inferential statistics. The results showed that back massage and breathing exercises were found to be effective non-pharmacological measure for reducing the intensity of labour pains in primigravida mothers.

The present study reveals that younger and more educated benefitted more. The association between level of pain reduction and their demographic variables. Women who had their age between 20-25

years in primigravida mothers benefited more. The association between level of anxiety pain perception, and their demographic variables . None of the variables are significantly associated. The association between level of anxiety reduction, pain perception and demographic variables . Elder and joint family mothers are benefited more. Statistical significance was calculated using chi square test.

CHAPTER – VI
SUMMARY AND CONCLUSION

Childbirth is a unique and special experience for every women. It is existing as well as strenuous with pain, fatigue and fear, both physically and psychologically Labour and birth process are viewed as a developmental event in a women's life, the mastery of which leads to increased sense of self esteem and personal strength. Anxiety is commonly associated with increased pain during labour and may modify the experience of labour pain. Pain in labour is nearly a universal experience for childbearing women and pain relief poses a major role. This can be achieved by relaxation which is thought to increase pain tolerance, reduction of anxiety, and decreased muscle tension. Relaxation may be enhanced through concentration on a specific breathing pattern during contraction, which is a cognitive activity and is most successful as a pain management strategy.

The main aim of the study was to find the effectiveness of lower back massage and breathing exercises on the reduction of anxiety and pain perception among primigravida mothers during first stage of labour at Deepam Hospital Limited, Tambaram, Chennai.

6.2. MAJOR FINDINGS OF THE STUDY

Frequency and percentage distribution of demographic variables of primigravid mothers in experimental and control group were as follows;

- The characteristics of demographic variables described in terms of frequency percentage showed that majority of primi mothers (50.0%) were in the age group of 20-25 years
- On considering educational status shows that equal percentage of mothers had secondary (26.7%) and primary education in

experimental Group 30% and in control Group 23.3% whereas in control Group number of mothers (30%) had collegiate education.

- ❖ Most of the primigravid mothers in experimental group (30.0%) homemakers and in control group (36.7%) were sedentary workers.

- ❖ The occupational status shows that equal percentage of mothers (33.3%) were moderate workers in experimental group as well as in control group.

- ❖ On the basis of religion equal number of primigravid mothers (33.3%) in experimental group and control group were Muslims.

- ❖ Equal number of primigravid mother's income were (23.3%) both in experimental group and control group.

- ❖ With regard to type of marriage had consanguineous marriage in both groups.

- ❖ Majority of primigravid mothers in experimental group (30.0%) and in control group (30.0%) were at 38-39 weeks of gestation.

6.3. IMPLICATIONS

The investigator had drawn the following implications from the study which os of vital concern in the field of nursing education, nursing practice, nursing administration and nursing research.

Nursing Education

Nurses with higher education and up-to-date knowledge will provide cost-effective and quality client care. One of the important aspects of nursing is alleviation of pain, provision of comfort and quality client care. Nurse education needs to include non-pharmacological pain relief measures like breathing exercises, back

massage in curriculum of basic nursing education as a part of intra-natal care along with the physiology of labour and labour supportive techniques. Students should be given a project to experiment the effect of back massage and breathing exercises to women in labour and also in-service education programmes should be organised periodically to upgrade the knowledge and skills of health care professionals in various non-pharmacological methods used in labour.

Nursing Practice

Giving birth is a profoundly beautiful experience for every woman. It permanently shapes the woman, her child, her partner and their family life. This is also a very fragile process. Labour for most women accompanied by much physical pain and emotions requiring special care in the form of some relaxation techniques like gentle touch, back massage and breathing exercises to relieve labour pain and anxiety become part of intra-natal care, it is expected that more mothers will have a natural, safe and satisfying childbirth experience.

Back massage and breathing exercises not only provide pain relief and anxiety reduction but also a feeling of comfort, caring, relaxation and reassurance.

Intrapartum care giver or the nurse attending labour have many opportunities to make the childbirth experience a pleasant and memorable one by providing comfort measures like back massage and by teaching them to perform exercises. The findings of the study can be utilised by practicing nurses in alleviating the suffering and providing comfort to all women in labour. As it is a simple, cost effective and safe techniques it can be practiced widely.

Nursing Administration

Nursing administration should take an initiative in creating policies or plans in providing education to women during pregnancy and

help them in safe delivery. Nurse administrators need to facilitate the utilisation of research-based nursing care aspects in day-to-day practices to formulate policies and make necessary changes in health care delivery system. They must make sure that the nurse-patient ratio is adequate in the labour room for rendering care such as back massage and to teach some breathing exercises. Necessary administrative support should be provided for the success of such acitivities.

Periodic surveys should be conducted to evaluate the effectiveness of the programme and necessary changes should be made from time to time.

Nursing research

A profession seeking to improve the practice of its members and to enhance its professional stature for the continual development of a relevant body of knowledge. Nursing research represents a critically important tool for the nursing profession to acquire such knowledge.

Nursing research needs to focus on supportive care techniques such as back massage, breathing exercises, its provision, and outcome of labour. The findings of the research need to be disseminated through publications so the utilisation of such research findings must be encouraged.

6.6. RECOMMENDATIONS

On the basis of the findings of the study the following recommendations are offered for the future research.

- A similar study could be conducted on a larger sample which would yield more reliable result
- A similar study could be conducted on multiparous mothers to know the differences of pain intensity.

- A comparative study could be conducted with other non-pharmacological measures of pain relief.

- A experimental study could be undertaken in different settings like District hospitals and upgraded primary health centers.

- A comparative study could be undertaken to evaluate the outcome of the labour with the provision of back massage and breathing exercise by a family member or health personnel

CONCLUSION

Lower back massage provided and breathing exercises which were taught to the mothers in the first stage of labour not only giving comfort, but also convey caring, sympathy, encouragement, acceptance and support. On the whole the study was enriching and provided new learning experience to the investigator in the field if research. The of present study shows that there is a great need for the health personnel to implement these methods in their clinical field and make them available to the women in labour.

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SECTION – A
DEMOGRAPHIC VARIABLES

1) Age

   a) 20 – 25 yrs ☐

   b) 26 – 30 yrs ☐

   c) 31 – 35 yrs ☐

2) Educational Status

   a) Primary Education ☐

   b) Secondary Education ☐

   c) Collegiate ☐

   d) Non formal Education ☐

3) Occupation

   a) Home maker ☐

   b) Sedentary ☐

   c) Moderate ☐

   d) Heavy Worker ☐

4) Religion

   a) Hindu ☐

   b) Muslim ☐

   c) Christian ☐

   d) Others ☐

5) Family Income

   a) Rs. 1000 – Rs. 2000/- Per Month ☐

   b) Rs. 2001 – Rs. 3000/- Per Month ☐

c) Rs. 3001 – Rs. 4000/- Per Month ☐

d) > Rs. 4001 – Rs. 4000/- Per Month ☐

6) Type of Marriage

a) Consanguineous Marriage ☐

b) Non Consanguineous Marriage ☐

7) Type of Family

a) Nuclear Family ☐

b) Joint Family ☐

8) Supportive Person

a) Husband ☐

b) Parents ☐

c) Neighbours ☐

9) Pregnancy Pattern

a) Planned ☐

b) Unplanned ☐

10) Locality

a) Urban ☐

b) Rural ☐

Obstetrical data

11) Gestational age

a) 37 – 38 weeks ☐

b) 38 – 39 weeks ☐

c) 39 – 40 weeks ☐

d) 40 – 41 weeks ☐

12) Duration of Married life

a) 0 – 5 Years ☐

b) 5 – 10 Years ☐

c) > 10 Years ☐

13) Menstrual Cycle

a) Regular ☐

b) Irregular ☐

14) Time of registration in Antenatal Clinic

a) 12 weeks ☐

b) 12 – 14 weeks ☐

c) > 14 weeks ☐

15) No. of Antenatal Visit

a) 1 – 5 Visits ☐

b) 6 – 10 Visits ☐

c) > 10 Visits

VISUAL ANALOGUE SCALE FOR PAIN ASSESSMENT

0 1 2 3 4 5 6 7 8 9 10

No Pain ——————————————————————— Worst Pain Possible

Instruction:

Please place a ✓ mark on the scale to indicate the amount of pain you are experiencing 0 as 'no pain' and 10 as 'worst pain possible'

Grading of pain score

Score	Degree of pain
<3	Mild
4-7	Moderate
>7	Severe

Anxiety assessment tool

Instruction to the interviewer: Read the following statements to the subjects and place a ✓ mark I the appropriate column to indicate how they feel at this moment.

Instruction to the interviewee: Please listen to the statement and state how you feel at this movement such as “very much”, “moderately”, “Somewhat” or “not at all”.

		Very much	Moderately	Somewhat	Not at all
Psychological					
1.	Feel afraid of being alone				
2.	Feel secure				
3.	Feel nervous while I think about my delivery				
4.	Don’t feel upset and panic easily				
5.	Feel relaxed				
6.	Feel tensed about the health of my unborn baby				
7.	Feel that there is good support from the health personnel				
Physiological					
8.	Feel my heart beating fast				
9.	Sweating profusely				
10.	Feel dryness in my mouth				
11.	Don’t feel weak and tired easily				
12.	Feel difficulty in swallowing				
13.	Bothered by head aches, neck and back pain				
14.	Feel numbness and tingling in my fingers and toes				
15.	Feel that this pain is intolerable				

SCORING

	Not at all	Somewhat	Moderately	Very much
Positive items	3	2	1	0
Negative items	0	1	2	3

GRADING OF SCORE

Level of anxiety	Score	Percentage
Mild	0-18	0-25
Moderate	19-36	26-50
Severe	37-54	51-75
Very Severe	55-72	76-100

Maximum Score = 72; Minimum Score =0.

செவிலியர் கல்லூரி, சென்னை மருத்துவக் கல்லூரி
சமுதாய நேர்காணல் படிவம்

பகுதி - அ

பின்வருவனவற்றை மிகவும் கவனமாக படித்து பொருத்தமானவற்றை சரியான இடத்தில் (✓) குறிப்பிடவும்

புள்ளி விவர ஆய்வு

1) வயது (ஆண்டுகளில்)
   - அ) 20-25 வயதுத்திற்குள் ☐
   - ஆ) 26-30 வயதுத்திற்குள் ☐
   - இ) 31-35 வயதிற்குற்குள் ☐

2) கல்வி நிலை
   - அ) ஆரம்பப் பள்ளி ☐
   - ஆ) உயர்நிலைப் பள்ளி ☐
   - இ) பட்டதாரி ☐
   - ஈ) படிக்காதவர் ☐

3) தொழில்
   - அ) வீட்டில் இருப்பவர் ☐
   - ஆ) லேசான வேலை ☐
   - இ) மிதமான வேலை ☐
   - ஈ) கடினமான வேலை ☐

4) மதம்
   - அ) இந்து ☐
   - ஆ) முஸ்லிம் ☐
   - இ) கிறித்தவர் ☐
   - ஈ) மற்றவை ☐

5) மாத வருமானம்

அ) ரூ.1000 முதல் ரூ.2000 வரை ☐

ஆ) ரூ.2000 முதல் ரூ.3000 வரை ☐

இ) ரூ.3000 முதல் ரூ.4000 வரை ☐

ஈ) ரூ.4000க்கு முதல் ☐

6) திருமண விபரம்

அ) உறவுமுறையில் திருமணமானவர் ☐

ஆ) உறவுமுறையில் திருமணம் ஆகாதவர் ☐

7) குடும்பம்

அ) தனிக்குடும்பம் ☐

ஆ) கூட்டுக்குடும்பம் ☐

8) ஆதரவாக இருப்பவர்

அ) கணவர் ☐

ஆ) பெற்றோர் ☐

இ) அருகில் குடியிருப்பவர் ☐

9) கருத்தரிக்கும் முறை

அ) திட்டமிட்டது ☐

ஆ) திட்டமிடாதது ☐

10) வசிக்கும் இடம்

அ) நகரம் ☐

ஆ) கிராமம் ☐

மகப்பேறு கால விவரங்கள்

1) பேறுகால விவரம்

அ) 37 - 38வது வாரம் ☐

ஆ) 38 - 39வது வாரம் ☐

இ) 39 - 40வது வாரம் ☐

ஈ) 40 - 41வது வாரம் ☐

2) திருமணகாலம்

அ) 0 - 5 வருடம் ☐

ஆ) 5 - 10 வருடம் ☐

இ) 10 வருடத்திற்கு மேல் ☐

3) மாதவிடாய் சுழற்சி

அ) சீரானது ☐

ஆ) சீரற்றது ☐

4) பேறுகாலத்தில் பதிவு செய்தல்

அ) 12வது வாரம் ☐

ஆ) 12 - 14வது வாரம் ☐

இ) 14வது வாரத்திற்கு மேல் ☐

5) பேறுகாலத்தின்போது பரிசீலனை செய்த எண்ணிக்கை

அ) 1-5 முறைகள் ☐

ஆ) 6 - 10வது வாரம் ☐

இ) 10 முறைக்கு மேல் ☐

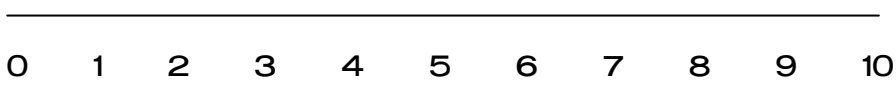
பிரிவு-ஆ

இணையான பார்வை அளவுகோல்

இணையான பார்வை அளவுகோல் என்பது தாய்மார்களால் உணரப்படும் பிரசவ வலியை அறிய உதவுகிறது.

குறிப்பு

தங்களது வலியின் அளவினை 0 முதல் 10 வரையிலான அளவுகோலின் சரியான இடத்தில் குறியிடவும்.



மதிப்பீட்டு அளவுகோல்

மதிப்பீடு	வலியின் அளவு
* 3	குறைந்த வலி
4-7	மிதமான வலி
* 7	கடுமையான வலி

பயம் குறித்த அளவு கருவி

குறிப்பு: கீழ்காணும் வாக்கியங்களை படித்து கொடுக்கப்பட்ட பெட்டியில் தகுந்த சரியான பதில் அளிக்கவும்

குறிப்பு: தயவுகூர்ந்து வாக்கியங்களை கவனித்து தற்போது எப்படி உணருகிறீர்கள் என்பதை அதாவது மிக அதிகமாக, மிதமான, ஓரளவு அல்லது வலி இல்லை.

	மனரீதியாக	மிக அதிகமாக	மிதமான	ஓரளவு	வலிஇல்லை
1.	தனிமையில் பயம்				
2.	பாதுகாப்பாக உணர்கிறேன்				
3.	பிரசவித்தை நினைக்கும்போது நடுக்கம்				
4.	பதட்டம் மற்றும் பயத்தை உணரவில்லை				
5.	இளைப்பாறும் உணர்வு				
6.	பிறக்கப்போகும் குழந்தையின் உடல்நலத்தைப் பற்றிய கவலை				
7.	நலப் பணியாளர்களின் நிறைவான உதவியை உணர்கிறேன்.				

உடல்ரீதியான

	மனரீதியாக	மிக அதிகமாக	மிதமான	ஓரளவு	வலிஇல்லை
1.	படபடப்பு உணர்வு				
2.	அதிகமான வியர்வை				
3.	வாய்வறட்சி உணர்தல்				
4.	பலமின்மை மற்றும் சோர்வாக உணர்தல்				
5.	விழுங்குதலில் சிரமம்				
6.	தலை, கழுத்து மற்றும் முதுகு வலி உணர்தல்				
7.	கை, கால்களில் மறத்துப் போதல் மற்றும் கூச்ச உணர்வு				
8.	தாங்க முடியாத வலியை உணர்தல்				

அளவுகோள்

	மனரீதியாக	வலி இல்லை	ஓரளவு	மிதமான வலி	மிக அதிகமாக
1.	நேர்மறையானவை	3	2	1	0
2.	எதிர்மறையானவை	0	1	2	3

மதிப்பீட்டு அளவுகோள்

	பதட்டத்தின் நிலை	அளவு	சதவிகிதம்
1.	வலி இல்லை	0-18	0-25
2.	ஓரளவு	19 - 36	26 - 50
3.	மிதமா	37 - 54	51 - 75
4.	மிக அதிகமாக	55 - 72	76 - 100

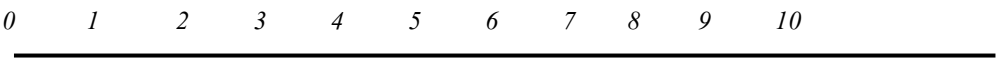
பிரிவு-ஆ

இணையான பார்வை அளவுகோல்

இணையான பார்வை அளவுகோல் என்பது தாய்மார்களால் உண்ரப்படும் பிரசவ வலியைஅறிய உதவுகிறது.

குறிப்பு:

தங்களது வலியின் அளவினை 0 முதல் 10 வரையிலான அளவுகோலின் சரியான இடத்தில் குறியிடவும்



வலி இல்லை

கொடூரமான வலி

மதிப்பீட்டு அளவுகோல்

மதிப்பீடு	வலியின் அளவு
<3	குறைந்த வலி
4-7	மிதமான வலி
>7	கொடூரமான வலி

பயம் குறித்த அளவு கருவி

குறிப்பு: கீழ்க்காணும் வாக்கியங்களை படித்து கொடுக்கப்பட்ட பெட்டியில் √ தகுந்த சரியான பதில் அளிக்கவும்

குறிப்பு: தயவு கூர்ந்து வாக்கியங்களை கவனித்து தற்போது எப்படி உணருகிறீர்கள் என்பதை அதாவது "மிக அதிகமாக" "மிதமான" "ஓரளவு" அல்லது "வலி இல்லை"

		மிக அதிகமாக	மிதமான	ஓரளவு	வலி இல்லை
மனரீதியாக					
1.	தனிமையில் பயம்				
2.	பாதுகாப்பாக உனர்கிறேன்				
3.	பிரசவித்தை நினைக்கும் போது நடுக்கம்				
4.	பதட்டம் மற்றும் பயத்தை உணரவில்லை				
5.	இளைப்பாறும் உணர்வு				
6.	பிறக்கப்போகும் குழந்தையின் உடல் நலத்தைப் பற்றிய கவலை				
7.	நலப் பணியாளர்களின் நிறைவான உதவியை உணர்கிறேன்				
உடல்ரீதியான					
1.	படபடப்பு உணர்வு				
2.	அதிகமான வியர்வை				
3.	வாய் வறட்சி உணர்தல்				
4.	பலமின்மை மற்றும் சோர்வாக உணர்தல்				
5.	விழுங்குதலில் சிரமம்				
6.	தலை,கழுத்து,ம்ற்றும்				

		மிக அதிகமாக	மிதமான	ஓரளவு	வலி இல்லை
	முதுகு வலியை உணர்தல்				
7.	கை,கல்களில், மறத்துப் போதல் மற்றும் கூச்ச உணர்வு				
8.	தாங்க முடியாத வலியை உணர்தல்				

அளவுகோள்

	வலி இல்லை	ஓரளவு	மிதமான வலி	மிக அதிகமாக
நேர்மறையானவை	3	2	1	0
எதிர்மறையனவை	0	1	2	3

மதிப்பீட்டு அளவுகோள்

பதட்டத்தின் நிலை	அளவு	சதவிகிதம்%
வலி இல்லை	0 – 18	0 - 25
ஓரளவு	19 -36	26 – 50
மிதமான வலி	37 – 54	51 – 75
மிக அதிகமாக	55 – 72	76 - 100

சுய ஒப்புதல் படிவம்

ஆய்வு செய்யப்படும் தலைப்பு

முதல் முறையாக கருவுற்ற தாய்மார்களுக்கு பிரசவ காலத்தில் ஏற்படும் வலி உணர்வையும் மற்றும் பதற்றத்தையும் கீழ்முதுகு பகுதியில் தடவுவதின் மூலமும், மூச்சு பயிற்சி கொடுப்பதன் மூலமும் குறைக்கும் திறனை அறிய ஓர் ஆய்வு

பங்குபெறுபவரின் பெயர்: வயது: தேதி:
உள்நோயாளி எண்:

..... என்பவராகிய நான் இந்த ஆய்வின் விவரங்களும் அதன் நோக்கங்களும் முறையாக அறிந்து கொண்டேன். எனது சந்தேகங்கள் அனைத்திற்கும் தகுந்த விளக்கம் அளிக்கப்பட்டது. இந்த ஆய்வில் முழு சுதந்திரத்துடனும் மற்றும் சுய நினைவுடனும் பங்கு கொள்ள சம்மதிக்கிறேன்.

எனக்கு விளக்கப்பட்ட விஷயங்களை நான் புரிந்துகொண்டு நான் எனது சம்மதத்தை தெரிவிக்கிறேன். இச்சுய ஒப்புதல் படிவத்தை பற்றி எனக்கு விளக்கப்பட்டது.

இந்த ஆய்வினைப் பற்றிய அனைத்து தகவல்களும் எனக்கு தெரிவிக்கப்பட்டது. இந்த ஆய்வில் எனது உரிமை மற்றும் பங்கினைப் பற்றி அறிந்து கொண்டேன்.

இந்த ஆய்வில் பிறரின் நிர்பந்தமின்றி என் சொந்த விருப்பத்தின்பேரில் தான் பங்கு பெறுகிறேன் மற்றும் நான் இந்த ஆராய்ச்சியிலிருந்து எந்நேரமும் பின்வாங்கலாம் என்பதையும் அதனால் எந்த பாதிப்பும் ஏற்படாது என்பதையும் நான் புரிந்து கொண்டேன்.

இந்த ஆய்வில் கலந்து கொள்வதன் மூலம் என்னிடம் பெறப்படும் தகவலை ஆய்வாளர் இன்ஸ்டிட்யூஷனில் எத்திக்ஸ் கமிட்டியினரிடமோ, அரசு நிறுவனத்தினரிடமோ தேவைபட்டால் பகிர்ந்து கொள்ளலாம் என சம்மதிக்கிறேன்.

இந்த ஆய்வின் முடிவுகளை வெளியிடும்போது எந்து பெயரோ, அடையளமோ வெளியிடப்படாது என் அறிந்து கொண்டேன். இந்த

ஆய்வின் விவரங்களைக் கொண்ட தகவல் தாளைப் பெற்றுக் கொண்டேன்.

இந்த ஆய்விற்காக இடுப்பு பகுதியில் மஸாஜ் செய்யவும், மூச்சு பயிற்சி செய்து பிரசவ வலியை குறைத்துகொள்ள சம்மதிக்கிறேன்.

இந்த ஆய்வில் பங்கேற்கும்பொழுது ஏதேனும் சந்தேகம் ஏற்பட்டால் உடனே ஆய்வாளரை தொடர்பு கொள்ளவேண்டும் என அறிந்து கொண்டேன்.

இச்சுய ஒப்புதல் படிவத்தில் கையொப்பமிடுவதின் மூலம் இதிலுள்ள அனைத்து விஷயங்களும் எனக்கு தெளிவாக விளக்கப்பட்டது என்று தெரிவிக்கிறேன். இச்சுய ஒப்புதல் படிவத்தின் ஒரு நகல் எனக்கு கொடுக்கப்படும் என்றும் அரிந்து கொண்டேன்.

....

ஆராய்ச்சியாளரின் கையொப்பம் **பங்கேற்பாளரின் கையொப்பம்**

தேதி: **தேதி:**

சான்றிதழ்

திருமதி உமா ரங்கா **M.Sc., (Nursing)** இரண்டாம் ஆண்டு வாலாஜாபாத், பத்மஸ்ரீ செவிலியர் கல்லூரியில் பயிலும் மாணவி தனது ஆராய்ச்சியில் பயன்படுத்திய வினாத்தாள் தமிழ் இலக்கண முறைப்படி சரிபார்க்கப்பட்டது மற்றும் பிழைத்திருத்தம் செய்யப்பட்டது என சான்றளிக்கப்படுகிறது.

இப்படிக்கு

07/08/2018

தலைமை ஆசிரியர்
ஊராட்சி ஒன்றிய நடுநிலைப்பள்ளி
சென்னிகுப்பம்
சென்னை - 600 056

CERTIFICATE FOR ENGLISH EDITING

To whom so ever it may concern

This is to certify that this dissertation titled **"A STUDY TO ASSESS THE EFFECTIVENESS OF LOWER BACK MASSAGE, BREATHING, EXERCISES ON REDUCTION OF ANXIETY AND PAIN PERCEPTION AMONG PRIMI GRAVIDA MOTHERS DURING FIRST STAGE OF LABOUR AT DEEPAM HOSPITALS LIMITED, TAMBARAM, CHENNAI"** done by Mrs. UMA RANGA, II year MSc Nursing student of Padmasree College of Nursing, Walajabad, Kanchipuram district has been edited by me and the use of English in this study is found appropriate.

Signature with seal

S. MAHESWARI, M.A.,M.Phil.,B.Ed.,
P.G. Teacher (English)
GOVT. HR. SEC SCHOOL (BOYS)
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CERTIFICATE FOR CONTENT VALIDITY

This is to certify that the tool constructed by Mrs.Uma Ranga II year M.Sc[Obstetric & Gynaecological Nursing] student of Padmasree College of Nursing, Walajabad, Kanchipuram District, which is to be used in her study titled "**A STUDY TO ASSESS THE EFFECTIVENESS OF LOWER BACK MASSAGE, BREATHING, EXERCISES ON REDUCTION OF ANXIETY AND PAIN PERCEPTION AMONG PRIMI GRAVIDA MOTHERS DURING FIRST STAGE OF LABOUR AT DEEPAM HOSPITALS LIMITED,TAMBARAM,CHENNAI.** " has been validated by the undersigned. The suggestions and modifications given by me will be incorporated by the investigator in concern with their respective guide. Then she can proceed in do the research.

SIGNATURE WITH SEAL,

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SIGNATURE WITH SEAL,

LETTER REQUESTING OPINION AND SUGGESTION OF EXPERTS FOR THE CONTENT VALIDITY OF RESEARCH TOPIC AND TOOL

FROM:

Uma Ranga
M.Sc(N) II yr Student
Obstetric and Gynaecological,
Padmasree College of Nursing,
Walajabad.

To :

Associate Professor,
Arun College of Nursing,
Vellore.

Respected Madam,

Sub: Content validity for M.Sc(N) Dissertation requested – reg.

I here with enclose the tool pertaining to my study for content validity.

In this regard I request you to kindly validate the enclosed to and give your valuable suggestions as below mentioned topic.

The topic is " **A Study to assess the effectiveness of lower back massage, breathing, exercises on reduction of anxiety and pain perception among primi gravida mothers during first stage of labour at Deepam Hospitals limited,Tambaram,Chennai. ,"**

Thanking you,

Yours faithfully,

Forwarded
Prof. Dr. L. Jaya
PRINCIPAL,
Padmasree College of Nursing,
20A, Masilamani Nagar, Walajabad
Kanchipuram to Chengalpet Road.
Tamil Nadu - 631 605

ETHICAL CLEARANCE CERTIFICATE

This is to certify that study topic is "A study to assess the Effectiveness of lower back massage and breathing exercises on reduction of anxiety and pain perception among primigravida mothers during first stage of labour at Deepam Hospitals Limited, Tambaram, Chennai" has cleared the criteria for Ethical Clearance by the following with the designation.

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